ORDER FO	R SUPPLIES	AND SER	VICES	IMPORTANT: See 300-1 for distribu	instructions in GSAR 55	3.370-			PAGE 1 OF 1 PAGE	
1. DATE OF ORDER 08/05/2010		2. ORDER GST0110B	NUMBER K0047	3. CONTRACT NU GS-06F-0654Z	JMBER		4. ACT NUMBER A21764163			
FOR	5. A	CCOUNT	NG CLASSIF	ICATION	6.					
GOVERNMENT USE ONLY	FUND 299X	ORG CODE A01VR110	B/A CODE F1	O/C CODE 25	AC		SS	VENDOR	NAME	
	FUNC CODE C01	C/E CODE H08	PROJ./PROS. NO.	CC-A	MDL		FI	G/L DEBT		
	W/ITEM	СС-В	PRT./CRFT	'	Al		LC	DISCOUN	Т	
7. TO: CONTRACTOR	(Name, address	and zip cod	e)		8. TYPE OF ORDER B. DELIVERY				ICE YOUR	
950 N GLEBE RD STE ARLINGTON, VA 22203 United States					Please furnish the folloattached sheets, if any	, includ	ing delivery as indi	cated.	sides of the order and t	
1 (0)									ve numbered contract.	
D(6)					C. MODIFICATION NO 00 TYPE OF MODIFICAT			AUTHORI	UTHORITY FOR ISSUING	
9A. EMPLOYER'S IDE	NTIFICATION N	UMBER	9B. CHECK, II		Except as provided herein, all terms and conditions of the original order, as heretofore modified, remain unchanged.			riginal order, as		
IOA. CLASSIFICATION A. Small Business				10B. TYPE OF BUSIN C. Corporation	10B. TYPE OF BUSINESS ORGANIZATION					
<i>code, and telephone n</i> GSA Region 1 Anthony W Pellegrino	Region 1 950 N GLEBE RD STE 1100 ony W Pellegrino ARLINGTON, VA 22203-1824 auseway Street Room 1085 on, MA 02222 d States			0	U.S. DOC/NOAA NESD 4855 Colesville Rd, Suit					
14. PLACE OF INSPE (6) U.S. DOC/NOAA NESD 4855 Colesville Rd, Suit Silver Spring, MD 20910 United States	IS te 1450	CEPTANCE		15. REQUISITION James Fahey GSA Region 1 10 Causeway Stree Boston, MA 02222 United States (617) 565-5170	l OFFICE <i>(Name, symbol a</i> et, Rm 1085	and tele	phone no.)			
16. F.O.B. POINT Destination		17. GOVE NO.			D.B. POINT ON OR		19. PAYMENT/DIS		ERMS YS / 0.00 % 0 DAYS	
Award of a Task Order The Grant Total amour				SF-0654Z. See attac	HEDULE ched Continuation Pages for this Task Order is	or detai	ls of the terms, con	iditions, and	d price of the Task Orde	
ITEM NO.	SI	JPPLIES	OR SERVIC	ES	QUANTITY ORDERED	UNIT			AMOUNT	
(A)			(B)		(C)	(D)	(E)		(F)	
				0(4)						
21. RECEIVING OFFIC NOAA CIO/NOD/Netwo							TOTAL From 300-A(s)			
22. SHIPPING POINT Specified in QUOTE			23. GROSS S	HIP WT.			GRAND TOTAL		L)	
24. MAIL INVOICE TO Finance Operations and (BCEB)			GSA Finance C	Customer Support	NG PAYMENT CONTACT:		25B. TELEPHON 816-926-7287			
299X PO Box 219434			Anthony W Pel	legrino	ORDERING OFFICER <i>(Typ</i>	pe)	26B. TELEPHON (617) 565-5750	E NO.		
Kansas City, MO 64121 United States				legrino 08/05/2010						
GENERAL SERVICES	ADMINISTRATI	ON	1. PAYING OF	FICE				GS	A FORM 300 (REV. 2-	

AMENDMENT OF SOLICITA	TION/MODIFIC	ATION OF CONTRACT	1.CONTRACT ID CODE	PAGE 1 OF 2 PAGE(S)
2.AMENDMENT/MODIFICATION NO. R1BK13090030 / P O 01	3.EFFECTIVE DATE 10/18/2010	4.REQUISITION/PURCHASE REQ NO. A21764163	5 PROJECT NO. (if app	plicable)
6. ISSUED BY GSA Region 1 Anthony W Pellegrino 10 Causeway Street Room 1085 Boston, MA 02222 United States b(6)		7. ADMINISTERED BY (If other that Anthony W Pellegrino	ın Item 6)	
8.NAME AND ADDRESS OF CONTRACTOR	(No., street, county, Sta	ate and ZIP Code)	9A. AMENDMENT OF	F SOLICITATION NO.
SOLERS INC			9B. DATED (SEE ITE	
950 N GLEBE RD STE 1100 ARLINGTON, VA 22203-1824 United States b(6)			10A. MODIFICATION NO. GS-06F-0654Z / GST01 TYPE OF MODIFICAT A Amount Change	
CODE	FACILITY CODE		10B. DATED (SEE ITE 08/05/2010 12:00 AM	EM 11)
11.THIS IT	EM ONLY APPL	IES TO AMENDMENTS OF S	SOLICITATIONS	
The above numbered solicitation is amended O is extended O is not extended. Offers must acknowledge receipt of this amendm				lowing methods:
(a) By completing items 8 and 15, and returning By separate letter or telegram which includes a re RECEIVED AT THE PLACE DESIGNATED FOOF YOUR OFFER. If by virtue of this amendment telegram or letter makes reference to the solicitati	copies of the amendm ference to the solicitati OR THE RECEIPT OF nt your desire to change	nent; (b) By acknowledging receipt of the ion and amendment numbers. FAILURI FOFFERS PRIOR TO THE HOUR AN e an offer already submitted, such chang	nis amendment on each copy E OF YOUR ACKNOWLE D DATE SPECIFIED MAY ge may be made by telegram	y of the offer submitted; or (c) DGMENT TO BE Y RESULT IN REJECTION
12.ACCOUNTING AND APPROPRIATION DA 299X . A01VR110 . F1 . 25 . C01 . H08				
		TO MODIFICATIONS OF CO ACT/ORDER NO. AS DESCRI		5.
THIS CHANGE ORDER IS ISSUED PURSORDER NO. IN ITEM 10A.	UANT TO: (Specify A	uthority) THE CHANGES SET FORT	H IN ITEM 14 ARE MADE	IN THE CONTRACT
THE ABOVE NUMBERED CONTRACT/O appropriation date, etc.) SET FORTH IN ITEM 1	RDER IS MODIFIED 4, PURSUANT TO TH	TO REFLECT THE ADMINISTRATI HE AUTHORITY OF FAR 43.103(b).	VE CHANGES (such as cha	anges in paying office,
THIS SUPPLEMENTAL AGREEMENT IS	ENTERED INTO PUR	RSUANT TO AUTHORITY OF:		
OTHER (Specify type of modification and FAR 43.103 - Administrative and FAR 43.103(b)				
E.IMPORTANT: Contractor IS required to s	ign this document and	return copies to the issuing office.		
14. DESCRIPTION OF AMENDMENT/MODIF	ICATION (Organized	by UCF section headings, including sol	icitation/contract matter wh	ere feasible.)
ORDER MOD DATED: 10/18/2010	Proposal Dated: 10/1	8/2010	Order ID: R1B	K13090030
PERFORMANCE PERIOD FROM: 08/05/2010	PERFORMANCE PI 02/04/2011	ERIOD TO:	Desired Delive	ery Date:
FOR INQUIRIES REGARDING PAYMENT CO	ECTED TO 10 10 16 FROM THE "MATERIALS" CO EVISED, ACCORDING ECTION G 5 OF THIS HED CONTINUATION	M % AND THE TOTAL ESTIMATED ONTRACT LINE ITEM FOR THE ENT GLY AND AS SET FORTH ON THE AT	O COST AND FEE IS REVISE ERPRISE SUBTASK FROM TACHED CONTINUATION GATED TO THIS TASK ORE	ED, ACCORDINGLY THIS TO PAGES DER IS INCREASED BY
GSA Finance Customer Support 816-926-7287	PRIOR AMOUNT	r	NEW AMOUNT	INCREASE/DECREASE
Cost To GSA:	b(4)	<u> </u>	TILW THROUNT	II CKLI DE DECKLASE
Except as provided herein, all terms and condition effect.	ns of the document refe	erenced in Item 9A or 10A, as heretofor	e changed, remains unchang	ged and in full force and

15A. NAME AND TITLE OF SIGNER(Type or p	orint)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type o Anthony W Pellegrino	r print)	
15B. CONTRACTOR/OFFEROR (6)	15C. DATE SIGNED 10/20/2010	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 10/20/2010	
(Signature of person authorized to sign)		(Signature of person authorized to sign)		
NSN 7540-01-152-8070 Previous edition unusable		STANDARD FORM 30 (REV. 10- Prescribed by GSA FAR (48 CFR) 53.		

AMENDMENT OF SOLICITA	ATION/MODIFICA	ATION OF CONTRACT	1.CONTRACT ID CODE	PAGE 1 OF 1 PAGE(S)
2.AMENDMENT/MODIFICATION NO. R1BK13090030 / P O 02	3.EFFECTIVE DATE 12/21/2010	4.REQUISITION/PURCHASE REQ NO. A21764163	5 PROJECT NO. (if app	
6. ISSUED BY GSA Region 1 10 Causeway Street Room 1085 Boston, MA 02222 United States		7. ADMINISTERED BY (If other than Anthony W Pellegrino (6)	I Item 6)	
8.NAME AND ADDRESS OF CONTRACTOR	(No., street, county, Sta	ate and ZIP Code)	9A. AMENDMENT OF	SOLICITATION NO.
b(6) SOLERS INC			9B. DATED (SEE ITEM	И 11)
950 N GLEBE RD STE 1100 ARLINGTON, VA 22203-1824 United States			10A. MODIFICATION NO. GS-06F-0654Z / GST011 TYPE OF MODIFICAT A Amount Change	
CODE	FACILITY CODE		10B. DATED (SEE ITE 10/20/2010 12:00 AM	M 11)
11.THIS IT	EM ONLY APPL	IES TO AMENDMENTS OF SO	OLICITATIONS	
The above numbered solicitation is amended is extended is not extended.	as set forth in item 14.	The hour and date specified for receipt of	of Offers	
I .	eference to the solicitation of the RECEIPT OF and your desire to change ion and this amendment ATA (If required) ONLY APPLIES	on and amendment numbers. FAILURE OFFERS PRIOR TO THE HOUR AND e an offer already submitted, such change	OF YOUR ACKNOWLEI D DATE SPECIFIED MAY e may be made by telegram ur and date specified. NTRACTS/ORDERS	OGMENT TO BE RESULT IN REJECTION or letter, provided each
THIS CHANGE ORDER IS ISSUED PURSORDER NO. IN ITEM 10A.				IN THE CONTRACT
THE ABOVE NUMBERED CONTRACT/C appropriation date, etc.) SET FORTH IN ITEM	14, PURSUANT TO TH	HE AUTHORITY OF FAR 43.103(b).	TE CHANGES (such as cha	anges in paying office,
☐ THIS SUPPLEMENTAL AGREEMENT IS ☐ OTHER (Specify type of modification and FAR 52.232-22 Limitation of Funds and 52.217-	authority)			
E.IMPORTANT: Contractor IS NOT requir	-			
14. DESCRIPTION OF AMENDMENT/MODIF			citation/contract matter who	ere feasible.)
ORDER MOD DATED: 12/20/2010	Proposal Dated: 12/20	0/2010	Order ID: R1B	K13090030
PERFORMANCE PERIOD FROM: 08/05/2010	PERFORMANCE PE 02/04/2012	ERIOD TO:	Desired Delive	ry Date:
THIS MODIFICATION FUNDS WORK ASSIGN THE CONTRACT THE TERM OF THE CONTR OF THE CONTRACT THE AMOUNT OBLIGAT ATTACHED CONTINUATION PAGES	ACT IS EXTENDED TO ED TO THIS TASK OR	FEBRUARY 4, 2012 THIS MODIFICA	TION FUNDS THE OPTIO	N TO EXTEND THE TERM
FOR INQUIRIES REGARDING PAYMENT CO GSA Finance Customer Support 816-926-7287		·I	NEW AMOUNT	DICTE A CE/DECIDE A CE
Cost To GSA:	PRIOR AMOUNT		NEW AMOUNT	INCREASE/DECREASE
Except as provided herein, all terms and condition	ns of the document refe	trenced in Item 9A or 10A, as heretofore	changed, remains unchang	ed and in full force and
effect. 15A. NAME AND TITLE OF SIGNER(Type or	print)	16A. NAME AND TITLE OF CONTRANTON W Pellegrino	RACTING OFFICER (Type	e or print)
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERI Anthony W Pello	egrino	16C. DATE SIGNED 12/21/2010
(Signature of person authorized to sign)		(Signature of person auth		
NSN 7540-01-152-8070 Previous edition unusable				D FORM 30 (REV. 10-83) y GSA FAR (48 CFR) 53.243

AMENDMENT OF SOLICITATION/MODIF	ICATION OF	CONTRACT	1. CONTRA	CT ID CODE		PAGE 1 OF 1 PAGE(S)
2.AMENDMENT/MODIFICATION NO. R1BK13090030 / P O 03	3.EFFECTIVE DATE 01/21/2011	4.REQUISITION/PURCHASE REQ. NO. 5. PROJECT NO. (if applicable)				
6. ISSUED BY GSA Region 1 D(6) 10 Causeway Street Room 1085	,	7. ADMINISTER Anthony W Pelle			5)	
Boston, MA 02222 United States (617) 565-5750						
8.NAME AND ADDRESS OF CONTRACTOR (No., s	street, county, St	ate and ZIP Code)			SOLICITATION NO.
SOLERS INC. 950 N GLEBE RD STE 1100 ARLINGTON, VA 22203-1824 United States b(G)				9B. DATED (10A. MODIFI CONTRACT/ GS-06F-0654 TYPE OF MO B. Administra	ICATION (ORDER N Z / GST01 ODIFICATI	OF NO. 10BK0047
CODE	FACILITY COD	E		POP Date Ch 10B. DATED	anges) (SEE ITE	
11. THIS ITEM ONLY	ADDLIES TO	AMENDMEN	TS OF SO	12/21/2010 12		
The above numbered solicitation is amended as is extended is not extended.						
Offers must acknowledge receipt of this amendment following methods:	prior to the hour	and date specifie	d in the solic	itation or as ar	mended, b	y one of the
(a) By completing items 8 and 15, and returning _ column the offer submitted; or (c) By separate letter or telegry YOUR ACKNOWLEDGMENT TO BE RECEIVED AT AND DATE SPECIFIED MAY RESULT IN REJECTIC already submitted, such change may be made by telegramendment, and is received prior to the opening hours.	am which include THE PLACE DI DN OF YOUR O egram or letter, p	es a reference to t ESIGNATED FOR FFER. If by virtue provided each tele	the solicitation THE RECE of this amen	n and amendr IPT OF OFFE dment your de	ment numb RS PRIOR esire to cha	pers. FAILURÉ OF R TO THE HOUR ange an offer
12.ACCOUNTING AND APPROPRIATION DATA (If 299X.A01VR110.F1.25.C01.H08	required)					
13. THIS ITEM ONLY API IT MODIFIES THE CO						
THIS CHANGE ORDER IS ISSUED PURSUAN CONTRACT ORDER NO. IN ITEM 10A.	T TO: (Specify A	uthority) THE CH	ANGES SET	FORTH IN IT	EM 14 AR	E MADE IN THE
THE ABOVE NUMBERED CONTRACT/ORDER paying office, appropriation date, etc.) SET FORTH I						ch as changes in
THIS SUPPLEMENTAL AGREEMENT IS ENTE	RED INTO PUR	SUANT TO AUTH	IORITY OF:			
OTHER (Specify type of modification and aut Negotiated Change Order	hority)					
E. IMPORTANT: Contractor IS required to sign the	is document and	d return copies to	the issuing o	ffice.		
14. DESCRIPTION OF AMENDMENT/MODIFICATION feasible.)	ON (Organized b	y UCF section hea	adings, inclu	ding solicitatio	n/contract	matter where
ORDER MOD DATED:01/21/2011	Proposal Dated			Order ID: R1		30
PERFORMANCE PERIOD FROM: 08/05/2010	PERFORMANO 02/04/2012	CE PERIOD TO:		Desired Deliv	ery Date:	
ITEM TASK ITEM DESCRIPTION		/IOUS MOD MOUNT		CHANGE MOUNT		NEW MOD AMOUNT
		b(4)				

THIS MODIFICATION RESULTS FROM A NEGOTIATED CHANGE ORDER. THE ORDER IS CHANGED BY REQUIRING THE CONTRACTOR TO SUBCONTRACT WITH PROVIDERS OF GOODS AND SERVICES TO MEET NEW CONTRACT REQUIREMENTS. AS A RESULT OF THIS NEGOTIATED CHANGE ORDER, THE CONTRACTOR SHALL COMPLY WITH ITS INTERNAL PURCHASING POLICIES AS WELL AS FAR CLAUSE 52.244-2. GOVERNMENT CONSENT, THROUGH THE CONTRACTING OFFICER, IS REQUIRED PRIOR TO THE CONTRACTOR ENTERING INTO ANY SUBCONTRACT PURSUANT TO THIS TASK ORDER. COMPLETE EQUITABLE ADJUSTMENT HAS BEEN MADE FOR THIS CHANGE ORDER. EQUITABLE ADJUSTMENT HAS BEEN MADE BY INCREASING THE AWARD FEE COMMENSURATE WITH THE ADDITIONAL PURCHASING REQUIREMENTS. THE CONTRACTOR IS REQUIRED TO SIGN THIS BILATERAL MODIFICATION.

FOR INQUIRIES REGARDING PAYMEI GSA Finance Customer Support 816-926-					
	PRIOR AMOUNT	NEW AMOUNT	INCREASE/DECREASE		
Cost To GSA:		b(4)			
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchang and in full force and effect.					
15A. NAME AND TITLE OF SIGNER(Ty	pe or print)	16A. NAME AND TITLE OF CONTRACTING Anthony W Pellegrino (617) 565-5750	G OFFICER (Type or print)		
15B. CONTRACTOR/OFFEROR (Signature of person putherized to	15C. DATE SIGNED 01/21/2011	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 01/21/2011		
(Signature of person authorized to	i sign)	(Signature of person authorized to sig			
NSN 7540-01-152-8070 Previous edition unusable			RD FORM 30 (REV. 10-83) by GSA FAR (48 CFR) 53.243		

AMENDM	ENT OF SOLICITATION/MODI	FICATION OF	CONTRACT	1. CONTRA	CT ID CODE		PAGE 1 OF 1 PAGE(S
2.AMENDME R1BK1309003	NT/MODIFICATION NO. 30 / P O 04	3.EFFECTIVE DATE 02/07/2011	4.REQUISITION A21764163	/PURCHASI	E REQ. NO.	5. PROJE applicable	ECT NO. (if
6. ISSUED B' GSA Region 1 Anthony W Pe 10 Causeway Boston, MA 02 United States (617) 565-575	ellegrino Street Room 1085 2222		7. ADMINISTER Anthony W Pelle			5)	
	ADDRESS OF CONTRACTOR (No.,	street, county, St	ate and ZIP Code)	9A. AMENDI	MENT OF S	SOLICITATION NO.
	RD STE 1100 VA 22203-1824				9B. DATED (10A. MODIFI CONTRACT/ GS-06F-0654 TYPE OF MC B. Administrat POP Date Ch	CATION CONTROL ORDER NOTE OF THE CATION CONTROL ORDER OF THE CATION CONTROL CONTROL ORDER OF THE CATION CONTROL CO	OF O. IOBK0047
CODE		FACILITY COD			10B. DATED 01/21/2011 12	2:00 AM	Л 11)
	11. THIS ITEM ONL	Y APPLIES TO	O AMENDMEN	TS OF SC	LICITATIO	NS	
	ve numbered solicitation is amended a ded (is not extended.	s set forth in item	14. The hour and	l date specifi	ed for receipt	of Offers	
Offers must a following met	cknowledge receipt of this amendmen hods:	t prior to the hour	and date specifie	d in the solic	itation or as ar	mended, by	one of the
the offer subr YOUR ACKN AND DATE S already subm	eting items 8 and 15, and returning _ content of the content of th	ram which include T THE PLACE DI ION OF YOUR O legram or letter, p	es a reference to t ESIGNATED FOR FFER. If by virtue provided each tele	he solicitation THE RECE of this amen	n and amendr IPT OF OFFE dment your de	ment numb RS PRIOR esire to cha	ers. FAILURE OF TO THE HOUR ange an offer
	TING AND APPROPRIATION DATA (I 10.F1.25.C01.H08	f required)					
	13. THIS ITEM ONLY AP IT MODIFIES THE C						
	ANGE ORDER IS ISSUED PURSUAN ORDER NO. IN ITEM 10A.	IT TO: (Specify A	uthority) THE CH/	ANGES SET	FORTH IN IT	EM 14 ARI	E MADE IN THE
	OVE NUMBERED CONTRACT/ORDER appropriation date, etc.) SET FORTH						h as changes in
THIS SU	PPLEMENTAL AGREEMENT IS ENTI	ERED INTO PUR	SUANT TO AUTH	IORITY OF:			
	Specify type of modification and au Bilateral (Other Agreement)	thority)					
E. IMPORT	ANT: Contractor IS required to sign t	his document and	d return copies to	the issuing o	ffice.		
14. DESCRIF feasible.)	TION OF AMENDMENT/MODIFICATI	ON (Organized b	y UCF section hea	adings, inclu	ding solicitatio	n/contract	matter where
ORDER MOD	DATED:02/07/2011	Proposal Dated	:02/07/2011		Order ID: R1	BK1309003	0
PERFORMAN 08/05/2010	NCE PERIOD FROM:	PERFORMANO 02/04/2012	DE PERIOD TO:		Desired Deliv	very Date:	
ITEM NO	TASK ITEM DESCRIPTION	l I	OUS MOD OUNT	11	CHANGI IOUNT	- 11	EW MOD MOUNT
	b(4)						
This Modificat	ion adds FAR CLAUSE 52.251-1 Govern	ment Supply Sou	rces per agreemer	nt of the partie	es. The Task O	order is mod	lified by adding the

following clause:

52.251-1 Government Supply Sources.Government Supply Sources (Apr 1984)

The Contracting Officer may issue the Contractor an authorization to use Government supply sources in the performance of this contract. Title to all property acquired by the Contractor under such an authorization shall vest in the Government unless otherwise specified in the contract. Such property shall not be considered to be "Government-furnished property," as distinguished from "Government property." The provisions of the clause entitled "Government Property," except its paragraphs (a) and (b), shall apply to all property acquired under such authorization.

FOR INQUIRIES REGARDING PAYMENT CONTACT: GSA Finance Customer Support 816-926-7287

• • • • • • • • • • • • • • • • • • • •								
	PRIOR AMOUNT	NT NEW AMOUNT INCREASE/DEC						
Cost To GSA:		b(4)						
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.								
15A. NAME AND TITLE OF SIGNER(TYD)	AND TITLE OF SIGNER(Type or print) 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type of Anthony W Pellegrino) (617) 565-5750							
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED 02/07/2011	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 02/08/2011					
(Signature of person authorized to	o sign)	(Signature of person authorized to sign)						
NSN 7540-01-152-8070 Previous edition unusable		STANDARD FORM 30 (REV. 10-83) Prescribed by GSA FAR (48 CFR) 53.243						

AMENDN	IENT OF SOLICITATION/MODI	FICATION OF	CONTRACT	1. CONTRA	CT ID CODE		PAGE 1 OF 1
2.AMENDME R1BK1309003	NT/MODIFICATION NO. 30 / P O 05	3.EFFECTIVE DATE 03/01/2011	4.REQUISITION A21764163	 /PURCHASE	REQ. NO.	5. PROJ applicab	PAGE(S) ECT NO. (if le)
6. ISSUED B GSA Region 1 Anthony W Pe 10 Causeway Boston, MA 0 United States (617) 565-575	ellegrino Street Room 1085 2222	7000.1201.	7. ADMINISTER Anthony W Pelleg			6)	
8.NAME AND	ADDRESS OF CONTRACTOR (No.,	street, county, St	ate and ZIP Code))	9A. AMENDI NO.	MENT OF	SOLICITATION
	RD STE 1100				9B. DATED	(SEE ITEI	M 11)
ARLINGTON, United States	VA 22203-1824				10A. MODIF CONTRACT GS-06F-0654 TYPE OF M A. Amount CI	ORDER 4Z / GST0 ODIFICAT	NO. 110BK0047
CODE		FACILITY COD	E		10B. DATED 02/08/2011 1		EM 11)
	11. THIS ITEM ONL	Y APPLIES TO	O AMENDMEN	TS OF SO	LICITATIO	NS	
The abo	ve numbered solicitation is amended a	s set forth in item	14. The hour and	date specifie	ed for receipt	of Offers	
is extend	ded C is not extended.						
Offers must a following met	cknowledge receipt of this amendment hods:	t prior to the hour	and date specified	d in the solici	ation or as ar	mended, b	y one of the
the offer subr YOUR ACKN AND DATE S already subm	eting items 8 and 15, and returning _ content	ram which include T THE PLACE DI ON OF YOUR O legram or letter, p	es a reference to the SIGNATED FOR FFER. If by virtue provided each telegon	he solicitation THE RECEI of this amend	n and amendn PT OF OFFEI dment your de	nent numb RS PRIOF esire to ch	pers. FAILURE OF R TO THE HOUR ange an offer
	TING AND APPROPRIATION DATA (I 10.F1.25.C01.H08	f required)					
	13. THIS ITEM ONLY AP						
	ANGE ORDER IS ISSUED PURSUAN ORDER NO. IN ITEM 10A.						E MADE IN THE
	OVE NUMBERED CONTRACT/ORDER appropriation date, etc.) SET FORTH						ch as changes in
THIS SU	PPLEMENTAL AGREEMENT IS ENTE	ERED INTO PUR	SUANT TO AUTH	ORITY OF:			
	Specify type of modification and au 2 Limitation of Funds	thority)					
	ANT: Contractor IS NOTrequired to s						
14. DESCRIF feasible.)	TION OF AMENDMENT/MODIFICATI	ON (Organized b	y UCF section hea	adings, includ	ling solicitation	n/contract	matter where
	DATED:03/01/2011	Proposal Dated			Order ID: R1		
PERFORMAI 08/05/2010	NCE PERIOD FROM:	02/04/2012	CE PERIOD TO:		Desired Deli	very Date	:
ITEM NO	TASK ITEM DESCRIPTION		OUS MOD	_	CHANGI OUNT	ll l	IEW MOD AMOUNT
	H	0 (4)					
FOR INQUIR	L CATION OBLIGATES FUNDS TO OPTIC IES REGARDING PAYMENT CONTAC		E ATTACHED COI	NTINUATION	PAGE.		
GSA Finance	Customer Support 816-926-7287	PRIOR AMOUNT	-	NI	EW AMOUNT	INC	REASE/DECREASE
			İ			İ	

Cost To GSA:								
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.								
15A. NAME AND TITLE OF SIGNER(Ty	pe or print)	16A. NAME AND TITLE OF CONTRACTING OFF Anthony W Pellegrino (617) 565-5750	TICER (Type or print)					
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA Anthony W Pellegrino 16C. DATE SIGNED 03/01/2011						
(Signature of person authorized to	sign)	(Signature of person authorized to sign)						
NSN 7540-01-152-8070 Previous edition unusable		STANDARD FORM 30 (REV. Prescribed by GSA FAR (48 CFR) 5						

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AMENDM	ENT OF SOLICITATION/MODI	FICATION OF	CONTRACT	1. CONTRA	CT ID CODE		PAGE 1 OF 1 PAGE(S)	
2.AMENDMEI R1BK1309003	NT/MODIFICATION NO. 50 / P O 06	3.EFFECTIVE DATE 03/29/2011	4.REQUISITION A21764163	ITION/PURCHASE REQ. NO. 5. PROJECT NO. (if applicable)				
6. ISSUED BY GSA Region 1 Anthony W Pe 10 Causeway Boston, MA 02 United States (617) 565-5750	llegrino Street Room 1085 2222		7. ADMINISTER Anthony W Pelle			6)		
	ADDRESS OF CONTRACTOR (No.,	street, county, St	tate and ZIP Code	e)	9A. AMENDI	MENT OF	SOLICITATION NO.	
SOLERS INC. 950 N GLEBE ARLINGTON, United States b(6)	RD STE 1100 VA 22203-1824				9B. DATED 10A. MODIF CONTRACT GS-06F-0654 TYPE OF MO B. Administra POP Date Ch	ICATION (ORDER N IZ / GST01 ODIFICATI Itive Chang	DF IO. 10BK0047	
CODE		FACILITY COD	ÞΕ		10B. DATED 03/01/2011 1		M 11)	
	11. THIS ITEM ONL	Y APPLIES TO	O AMENDMEN	ITS OF SC	LICITATIO	NS		
	ve numbered solicitation is amended a	as set forth in item	14. The hour and	d date specif	ied for receipt	of Offers		
Offers must a following meth	cknowledge receipt of this amendmer nods:	nt prior to the hour	and date specifie	d in the solid	itation or as a	mended, b	y one of the	
the offer subm YOUR ACKNO AND DATE S already submi	(a) By completing items 8 and 15, and returning _ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
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Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.						
15A. NAME AND TITLE OF SIGNER(Ty	pe or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Anthony W Pellegrino (617) 565-5750			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED 03/29/2011	Anthony W Pellegrino		16C. DATE SIGNED 03/29/2011	
(Signature of person authorized to	o sign)		(Signature of person authorized to sign)			
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ATTACHMENT A DEFINITION OF REQUIRED ADDITIONAL WORK FOR ESPDS DEVELOPMENT ENTERPRISE TASK

The addition of scope to ESPDS Development Enterprise Task is as follows:

ADDITIONAL TASK 1

Task: The contractor shall add the position of full-time scheduler to the enterprise staff to accommodate recommendations of the Government Integrated Baseline Review team.

Justification: A modification to the contract is required to add the position of full-time scheduler to the Enterprise task in order to maintain ESPDS Development schedule alignment with GOES-R and NPP schedule milestones. The scheduler shall perform Integrated Master Schedule (IMS) maintenance including adding and monitoring program risks in the schedule, updating work assignment status on a monthly basis, monitoring the critical path for each work assignment, and verifying schedule integrity using the NASA Schedule Test and Assessment (STAT) tool. Results of the STAT tool shall be provided to the Government along with the IMS on a monthly basis.

ADDITIONAL TASK 2

Task: The contractor shall provide management and technical oversight of the ESPC network upgrade in order to verify the upgrade will meet the future needs for ESPC data distribution.

Justification: A modification to the contract is required to add management and technical oversight of the upgrade of the ESPC network. A network upgrade is required to handle the increased volume of satellite data expected in the NPP and GOES-R era. The contractor shall manage the upgrade to ensure future ESPC data distribution requirements are met without impacting current ESPC operations.

ADDITIONAL TASK 3

Task: The contractor shall deliver System/Segment Specification (SSS) for ESPDS as a new CDRL. The new CDRL will be an ESPDS Enterprise level CDRL and shall be created specifically to accommodate similar, or identical, SRD requirements and unify the work assignments into one enterprise "system" versus the heterogeneous, "stovepiped," architecture, filled with single purpose computers in the ESPC today. While the individual Work Assignment SRDs are written in such a way to reflect the requirements of a "complete" system, the subsystems defined by the various WAs are being developed in an integrated, enterprise fashion and the overlapping requirements of the component parts need to be generalized to accommodate the range of enterprise needs. This Enterprise SSS shall be used to provide the cohesiveness from the

various system requirements in the Work Assignment SRDs provided by NOAA. It is expected that this cohesive system view and evolving system will reduce documentation, software development, testing, and hardware costs as WA's are added, as well as related O&M costs in the future. The SSS shall be have an initial delivery at the first WA SRR/SDR and a revised SSS will be delivered at each WA PDR and as required. The acceptance code for this CDRL shall be "A".

ADDITIONAL TASK 4

Task: The contractor shall support ongoing IT security efforts currently underway at NSOF in order to assure future ESPDS deliveries meet NOAA IT security requirements and shall pass certification and accreditation.

Justification: NOAA currently has over seven working groups working different areas of IT security at the NSOF. The contractor shall supply necessary ESPDS development representation in each of the IT security areas in order to reduce the risk of transition of the future deliveries of the ESPDS into the NSOF environment.

AMENDMENT OF SOLICITAT	ION/MODIFICA	ATION OF	CONTRACT	1. CONTRACT ID CODE		PAGE 1 OF 1 PAGE(S)
2.AMENDMENT/MODIFICATION NO R1BK13090030 / P O 020	DA	FFECTIVE TE 18/2012	4.REQUISITION A21764163	/PURCHASE REQ. NO.	5. PROJ applicab	ECT NO. (if le)
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The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers is extended is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning _ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified. 12.ACCOUNTING AND APPROPRIATION DATA (If required) 299X.A01VR110.F1.25.C01.H08 13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
OTHER (Specify type of modifi FAR 43.103(a) - Agreement of the Pa		rity)				
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This Modification issues a new, and rep CDRL, Attachment J.1 is attached. FOR INQUIRIES REGARDING PAYN GSA Finance Customer Support 816-9.	olaces the current, 0 MENT CONTACT: 26-7287			ot (CDRL) Attachment J.1		tract. The new
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Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER(Type or print 5(6)	·)	16A. NAME AND TITLE OF CONTRACTING OFFICAnthony W Pellegrino (617) 565-5750	CER (Type or print)				
15B. CONTRACTOR/OFFEROR b(6)	15C. DATE SIGNED 10/18/2012	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 10/18/2012				
(Signature of person authorized to sign)		(Signature of person authorized to sign)					
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ATTACHMENT B

DEFINITION OF REQUIRED ADDITIONAL WORK FOR ESPDS DEVELOPMENT WORK ASSIGNMENT 1 – PRODUCT **DISTRITUBTION AND ACCESS (PDA)**

The addition of scope to ESPDS Development Work Assignment 1 (PDA) is as follows:

ADDITIONAL TASK 1

Task: The contractor shall compress their PDA development schedule in order to align with the milestones of the overall GOES-R development schedule and shall add dry-runs for all major reviews in order to properly set expectations between the contractor and the Government.

Justification: A modification to the contract is required to align the ADRS development schedule with the overall GOES-R development schedule and accommodate additional interface meetings between the ESPDS Development contractor and the GOES-R GS team. As recommended by the IIRT at the PDA SRR/SDR, dry-runs for all major reviews shall be incorporated into the overall PDA development schedule in order to properly set expectations prior to the formal reviews.

ADDITIONAL TASK 2

Task: The contractor shall support the activities of the GOES-R Independent Review Team (IRT) including responding for both Advisories (ADV) and Requests for Action (RFA).

Justification: A modification of the contract is required to add additional system engineering support to support the activities of the GOES-R Independent Review Team (IRT) and respond to both Advisories (ADV) and Requests for Action (RFA) as dictated by the IRT.

ATTACHMENT C

DEFINITION OF REQUIRED ADDITIONAL WORK FOR ESPDS DEVELOPMENT WORK ASSIGNMENT 2 - NPOESS DATA **EXPLOITATION (NDE)**

The addition of scope to ESPDS Development Work Assignment 2 (NDE) is as follows:

ADDITIONAL TASK 1

Task: The contractor shall complete detailed requirements, system, and software documentation not completed by the previous contractor.

Justification: A modification to the contract is required to complete detailed documents that were not completed by the previous contractor. The completion of detailed requirements is needed in option year 1 to ensure the development and execution of NDE's System Integration test prior to NPP launch. The completion of System/Software documentation is required in option year 2 to provide OSPO engineering staff with the ability to maintain the NDE system after transition.

ADDITIONAL TASK 2

Task: The contractor shall perform specification, acquisition, installation, and configuration of compute, storage, and network equipment in Development, Test, and Production Environments.

Justification: A modification of the contract is required for the NDE System Engineers to acquire and integrate NDE production hardware to ingest, process, and distribute NPP data to NOAA customers. The additional effort is required due to delays in contract award and launch. The proposed hardware acquisition and integration is scheduled to be conducted between May and September 2011.

ADDITIONAL TASK 3

Task: The contractor shall perform acquisition, installation, configuration, and administration of Oracle RAC in System Test and Production environments.

Justification: A modification of the contract is required to perform necessary Oracle RAC work. Oracle is a Relational Database Management System that was selected prior to CDR to meet NDE specific requirement to use an RDBMS. While an installation of Oracle Real Application Cluster (RAC) had been planned in the System Test and Production Environments, this activity (acquisition and installation) was not part of the RFP and therefore was not included in the proposal. RAC is used by the NDE application software and the SOA messaging infrastructure software (JBoss) to meet NDE's scalability and high availability requirements.

ADDITIONAL TASK 4

Task: The contractor shall complete build 4 - Inclusion of Product Definition, Ingest, Production Generation, and Distribution GUIs. Justification: A modification to the contract is required to ensure NDE

usability by all users, not just customers and will cover the cost of operator GUI development for software development for Ingest, Product Generation, and Distribution subsystems.

This work was not included in the RFP.

ADDITIONAL TASK 5

Task: The contractor shall conduct External Interface Tests (excluding NCT-4).

Justification: A modification of the contract is required for the NDE Developers to conduct external interface testing between NDE and the principal user community: National Weather Service AWIPS and NCEP, CLASS, STAR, DoD Centrals and EUMETSAT. The additional level of testing became a requirement after the SOW for the ESPDS Development Task was submitted. The proposed testing is to be conducted during the summer of 2011 and will ensure the principal recipients of NPP data will be ready for the new mission staring in FY 2012.

ATTACHMENT D

DEFINITION OF REQUIRED ADDITIONAL WORK FOR ESPDS **DEVELOPMENT WORK ASSIGNMENT 4 – ANCILLIARY** DATA RELAY SYSTEM (ADRS)

The addition of scope to ESPDS Development Work Assignment 4 (ADRS) is as follows:

ADDITIONAL TASK 1

Task: The contractor shall compress their ADRS development schedule in order to align with the milestones of the overall GOES-R development schedule and shall add dry-runs for all major reviews in order to properly set expectations between the contractor and the Government.

Justification: A modification to the contract is required to align the ADRS development schedule with the overall GOES-R development schedule and accommodate additional interface meetings between the ESPDS Development contractor and the GOES-R GS team. As recommended by the IIRT at the PDA SRR/SDR, dry-runs for all major reviews shall be incorporated into overall WA development schedules in order to properly set expectations prior to the formal reviews involving the GOES-R GS team.

ADDITIONAL TASK 2

Task: The contractor shall support the activities of the GOES-R Independent Review Team (IRT) including responding for both Advisories (ADV) and Requests for Action (RFA).

Justification: A modification of the contract is required to add additional system engineering support to support the activities of the GOES-R Independent Review Team (IRT) and respond to both Advisories (ADV) and Requests for Action (RFA) as dictated by the IRT.

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2.AMENDME R1BK1309003	NT/MODIFICATION NO. 30 / P O 07	3.EFFECTIVE DATE 05/06/2011	4.REQUISITION/ A21764163	/PURCHASE	REQ. NO.	5. PROJE applicable	ECT NO. (if
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This Modification results from a negotiated change order (Supplemental Agreement) for work within the scope of the contract. The contract is changed as set forth on the attached documents titled "Attachment A", "Attachment B", "Attachment C", and "Attachment D". The estimated cost of performance resulting from the changes to contract requirements is \$2,161,863.62. The estimated cost of performance and therefore the value of Option Period 1 of the contract, is increased from \$13,352,584.47

by \$2,161,863.62 to \$15,514,448.09. This modification and supplemental agreement makes complete equitable adjustment for the changes to the

contract. This contract is incrementally funded. There is no change in the amount obligated to the contract. See the attached continuation page for the amount obligated to this contract. FOR INQUIRIES REGARDING PAYMENT CONTACT: GSA Finance Customer Support 816-926-7287 PRIOR AMOUNT **NEW AMOUNT** INCREASE/DECREASE Cost To GSA: Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect. 15A. NAME AND TITLE OF SIGNER(Type or print) 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Anthony W Pellegrino 15B. CONTRACTOR/OFFEROR 16B. UNITED STATES OF AMERICA 15C. DATE 16C. DATE SIGNED Anthony W Pellegrino SIGNED 05/06/2011 05/06/2011 (Signature of person authorized to sign) (Signature of person authorized to sign) NSN 7540-01-152-8070 STANDARD FORM 30 (REV. 10-83) Previous edition unusable Prescribed by GSA FAR (48 CFR) 53.243

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The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers is extended is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning _ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to								
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15B. CONTRACTOR/OFFEROR b(6)	15C. DATE SIGNED 05/16/2011	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 05/16/2011		
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14. DESCRIF feasible.)	TION OF AMENDMENT/MODIFIC	ATION (Organized by	y UCF section hea	idings, including s	solicitation/	contract i	matter where
ORDER MOD	DATED:06/14/2011	Proposal Dated	1:06/14/2011	Ord	ler ID: R1B	K1309003	30
PERFORMAI 08/05/2010	NCE PERIOD FROM:	PERFORMANO 02/04/2012	CE PERIOD TO:	Des	sired Delive	ery Date:	
ITEM NO	TASK ITEM DESCRIPTION	III	OUS MOD	MOD CH AMOL		H	EW MOD MOUNT
		b(4)					
attached conti FOR INQUIR	ion obligates funds to Option Period in uation page. IES REGARDING PAYMENT CON Customer Support 816-926-7287	,	ne amount obligate	d to this Contract is	s set forth i	n Contrac	t Clause G5, the
	2 2 2 2 pp 2 2 2 2 2 2 2 2 2 2 2 2 2 2	PRIOR AMOUNT	-	NEW A	TNUOMA	INCF	REASE/DECREASE

Cost To GSA:		b(4)						
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.								
15A. NAME AND TITLE OF SIGNER(Type or pri	nt)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Anthony W Pellegrino (617) 565-5750						
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 06/14/2011					
(Signature of person authorized to sign)	_	(Signature of person authorized to sign)						
NSN 7540-01-152-8070 Previous edition unusable	-	STANDARD FORM 30 (REV. 10-83) Prescribed by GSA FAR (48 CFR) 53.243						

AMENDMENT OF SOLICITATION CONTRACT	I/MODIFIC	ATION OF	1. CONTRACT	ID CODE		PAGE 1 OF 1 PAGE(S)
2.AMENDMENT/MODIFICATION NO. R1BK13090030 / P O 10	3.EFFI 07/15/2	ECTIVE DATE 2011	4.REQUISITIO A21764163	N/PURCHASE REQ. NO.	5. PROJI	
6. ISSUED BY GSA Region 1 Anthony W Pellegrino 10 Causeway Street Room 1085 Boston, MA 02222 United States (617) 565-5750				RED BY (If other than Item egrino (617) 565-5750	6)	
8.NAME AND ADDRESS OF CONTRACTOR	R (No., street,	, county, State a	and ZIP Code)	9A. AMENDMENT (OF SOLIC	ITATION NO.
SOLERS INC.				9B. DATED (SEE IT	EM 11)	
950 N GLEBE RD STE 1100 ARLINGTON, VA 22203-1824 United States				10A. MODIFICATIO NO. GS-06F-0654Z / GST TYPE OF MODIFIC. A. Amount Change	0110BK00	
CODE	FACIL	ITY CODE		10B. DATED (SEE I 06/14/2011 12:00 AM		
11. THIS ITEM	ONLY AP	PLIES TO A	MENDMENTS	S OF SOLICITATIONS	3	
The above numbered solicitation is ame is extended is not extended. Offers must acknowledge receipt of this ame following methods: (a) By completing items 8 and 15, and returning the solicitation is ame following methods:	ndment prior	to the hour and	date specified in	n the solicitation or as ame	nded, by o	
(a) by completing items of and 1s, and return the offer submitted; or (c) By separate letter of YOUR ACKNOWLEDGMENT TO BE RECEI AND DATE SPECIFIED MAY RESULT IN Real already submitted, such change may be mad amendment, and is received prior to the oper	or telegram w VED AT THE EJECTION O le by telegran	hich includes a PLACE DESIG F YOUR OFFEI n or letter, provid	reference to the SNATED FOR TI R. If by virtue of ded each telegra	solicitation and amendme HE RECEIPT OF OFFERS this amendment your desir	nt number PRIOR To te to chan	rs. FAILURÉ OF O THE HOUR ge an offer
12.ACCOUNTING AND APPROPRIATION D 299X.A01VR110.F1.25.C01.H08	OATA (If requi	red)				
				F CONTRACTS/ORD SCRIBED IN ITEM 14	_	
THIS CHANGE ORDER IS ISSUED PUF CONTRACT ORDER NO. IN ITEM 10A.	RSUANT TO:	(Specify Author	rity) THE CHAN	GES SET FORTH IN ITEM	I 14 ARE I	MADE IN THE
THE ABOVE NUMBERED CONTRACT/paying office, appropriation date, etc.) SET F						as changes in
THIS SUPPLEMENTAL AGREEMENT IS	S ENTERED	INTO PURSUA	NT TO AUTHOR	RITY OF:		
OTHER (Specify type of modification a FAR 52.232-22 Limitation of Funds	and authority	y)				
E. IMPORTANT: Contractor IS required to	o sign this do	cument and retu	urn copies to the	issuing office.		
14. DESCRIPTION OF AMENDMENT/MODI feasible.)	FICATION (C	organized by UC	F section headi	ngs, including solicitation/c	ontract m	atter where
ORDER MOD DATED:07/14/2011	Propos	sal Dated:07/14/	/2011	Order ID: R1BK1309	0030	
PERFORMANCE PERIOD FROM: 08/05/2010	PERF0 02/04/2	ORMANCE PEF 2012	RIOD TO:	Desired Delivery Da	te:	
ITEM TASK ITEM DESCRI	PTION		US MOD OUNT	MOD CHANGE AMOUNT		EW MOD AMOUNT
This modification deobligates attached continuation page for details of the all agreement, via signature on this modification, be FOR INQUIRIES REGARDING PAYMENT C GSA Finance Customer Support 816-926-7287	ocation of fund by the Contrac CONTACT:	ding for Task Íter	nd obligates by			
		RIOR AMOUNT		NEW AMOUNT	INCRE	EASE/DECREASE
Cost To GSA:			b(4	4)		

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
b(6)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Anthony W Pellegrino					
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED 07/15/2011	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 07/15/2011				
(Signature of person authorized to sign)		(Signature of person authorized to sign)					
NSN 7540-01-152-8070 Previous edition unusable		STANDARD FORM Prescribed by GSA FAR					

AMENDM	ENT OF SOLICITATION/MODIF	ICATION OF	CONTRACT	1. CONTRA	CT ID CODE		PAGE 1 OF 1 PAGE(S)
2.AMENDME R1BK1309003	NT/MODIFICATION NO. 0 / P O 11	3.EFFECTIVE DATE 08/11/2011	4.REQUISITION/ A21764163	PURCHASE	REQ. NO.	5. PROJE applicable	ECT NO. (if
6. ISSUED BY GSA Region 1 Anthony W Pe 10 Causeway Boston, MA 02 United States (617) 565-575	llegrino Street Room 1085 222		7. ADMINISTERI Anthony W Pelleg			5)	
8.NAME AND	ADDRESS OF CONTRACTOR (No., s	treet, county, Sta	ate and ZIP Code)		9A. AMENDI NO.	MENT OF	SOLICITATION
SOLERS INC. 950 N GLEBE					9B. DATED (•
ARLINGTON, United States b(6)	VA 22203-1824				10A. MODIFICONTRACTA GS-06F-0654 TYPE OF MO A. Amount Ch	ORDER N Z / GST01 DDIFICAT	IO. 10BK0047
CODE		FACILITY COD	E		10B. DATED 07/15/2011 1:		M 11)
	11. THIS ITEM ONLY	APPLIES TO	AMENDMEN	TS OF SO	LICITATION	NS	
	ve numbered solicitation is amended as led is not extended.	set forth in item	14. The hour and	date specifie	ed for receipt o	of Offers	
Offers must a following meth	cknowledge receipt of this amendment nods:	prior to the hour	and date specified	l in the solicit	ation or as an	nended, by	one of the
the offer subm YOUR ACKN AND DATE S already subm	ting items 8 and 15, and returning _ cop nitted; or (c) By separate letter or telegra OWLEDGMENT TO BE RECEIVED AT PECIFIED MAY RESULT IN REJECTIO itted, such change may be made by tele and is received prior to the opening hou	am which include THE PLACE DE ON OF YOUR OF egram or letter, p	es a reference to the SIGNATED FOR FER. If by virtue of the ordinal telegraphics are the second telegraphics are the second telegraphics.	ne solicitation THE RECEI of this amend	n and amendm PT OF OFFEF Iment your de	nent numb RS PRIOR sire to cha	ers. FAILURE OF TO THE HOUR inge an offer
	TING AND APPROPRIATION DATA (IF 10.F1.25.C01.H08	required)					
	13. THIS ITEM ONLY APP IT MODIFIES THE CO						
THIS CH	ANGE ORDER IS ISSUED PURSUANT DRDER NO. IN ITEM 10A.	ΓTO: (Specify A	uthority) THE CHA	NGES SET	FORTH IN ITE	EM 14 ARI	E MADE IN THE
	OVE NUMBERED CONTRACT/ORDER appropriation date, etc.) SET FORTH II						h as changes in
THIS SU	PPLEMENTAL AGREEMENT IS ENTE	RED INTO PUR	SUANT TO AUTH	ORITY OF:			
	Specify type of modification and auti (1) - Supplemental Agreement	hority)					
	ANT: Contractor IS required to sign th		· · · · · · · · · · · · · · · · · · ·				
14. DESCRIP feasible.)	TION OF AMENDMENT/MODIFICATION	ON (Organized by	y UCF section hea	dings, includ	ling solicitation	/contract	matter where
ORDER MOD	ORDER MOD DATED:08/10/2011						30
PERFORMAN 08/05/2010	ICE PERIOD FROM:	PERFORMANO 02/04/2012	CE PERIOD TO:		Desired Deliv	ery Date:	
ITEM	TASK ITEM	PREVIO	OUS MOD	MOD	CHANGE	N	EW MOD
NO	DESCRIPTION	AM	OUNT	AM	OUNT		MOUNT
	b(4)						=
dated July 14,	n of this modification (Modification 011) a 2011 modified by that certain email from om any and all liability under this contract	the Contractor to	the Government da	ated August 5	, 2011, the Co	ntractor he	reby releases the

https://was.itss.gsa.gov/rba_modernization/xhtml/view/viewForm30Print.se... 8/11/2011

proposal for adjustment.

The modification (Modification 011) modifies the Task Order by increasing the value of Option Period 1 resulting from the equitable adjustment

described in the preceding paragraph and for an increase in the estimated cost of Enterprise Other Direct Costs all of which is set forth on the attached Continuation Page. FOR INQUIRIES REGARDING PAYMENT CONTACT: GSA Finance Customer Support 816-926-7287 NEW AMOUNT PRIOR AMOUNT INCREASE/DECREASE Cost To GSA: Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect. 15A. NAME AND TITLE OF SIGNER(Type or print) 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Anthony W Pellegrino (617) 565-5750 15B. CONTRACTOR/OFFEROR 15C. DATE 16B. UNITED STATES OF AMERICA 16C. DATE **SIGNED** Anthony W Pellegrino SIGNED 08/11/2011 08/11/2011 (Signature of person authorized to sign) (Signature of person authorized to sign) NSN 7540-01-152-8070 STANDARD FORM 30 (REV. 10-83) Previous edition unusable Prescribed by GSA FAR (48 CFR) 53.243

AMENDMENT OF SOLICITATION/N CONTRACT	MODIFICATION OF	1. CONTRACT	TID CODE	PAGE 1 OF 1 PAGE(S)			
2.AMENDMENT/MODIFICATION NO. R1BK13090030 / P O 12	3.EFFECTIVE DATE 10/11/2011	4.REQUISITIC A21764163	N/PURCHASE REQ. NO.	5. PROJECT NO. (if applicable)			
6. ISSUED BY GSA Region 1 Anthony W Pellegrino 10 Causeway Street Room 1085 Boston, MA 02222 United States (617) 565-5750 7. ADMINISTERED BY (If other than Item 6) Anthony W Pellegrino (617) 565-5750							
8.NAME AND ADDRESS OF CONTRACTOR (No., street, county, State	and ZIP Code)	9A. AMENDMENT C	OF SOLICITATION NO.			
SOLERS INC.			9B. DATED (SEE IT	EM 11)			
950 N GLEBE RD STE 1100				N OF CONTRACT/ORDER			
ARLINGTON, VA 22203-1824 United States b(6)			NO. GS-06F-0654Z / GST TYPE OF MODIFIC A. Amount Change				
CODE	FACILITY CODE		10B. DATED (SEE I 08/11/2011 12:00 AM				
11. THIS ITEM C	ONLY APPLIES TO A	MENDMENT	S OF SOLICITATIONS	3			
The above numbered solicitation is amend is extended is not extended. Offers must acknowledge receipt of this amend							
following methods: (a) By completing items 8 and 15, and returning _ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12.ACCOUNTING AND APPROPRIATION DA' 299X.A01VR110.F1.25.C01.H08	TA (If required)						
			OF CONTRACTS/ORD ESCRIBED IN ITEM 14	_			
THIS CHANGE ORDER IS ISSUED PURS CONTRACT ORDER NO. IN ITEM 10A.	UANT TO: (Specify Autho	rity) THE CHAN	GES SET FORTH IN ITEM	14 ARE MADE IN THE			
THE ABOVE NUMBERED CONTRACT/OF paying office, appropriation date, etc.) SET FOR							
THIS SUPPLEMENTAL AGREEMENT IS E	ENTERED INTO PURSUA	NT TO AUTHO	RITY OF:				
OTHER (Specify type of modification an FAR 52.232-22 Limitation of Funds	d authority)						
E. IMPORTANT: Contractor IS required to s	sign this document and ret	urn copies to the	e issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFIC feasible.)	CATION (Organized by U	CF section headi	ings, including solicitation/c	ontract matter where			
ORDER MOD DATED:10/11/2011	Proposal Dated:10/11	/2011	Order ID: R1BK1309	0030			
PERFORMANCE PERIOD FROM: 08/05/2010	PERFORMANCE PE 02/04/2012	RIOD TO:	Desired Delivery Da	te:			
ITEM TASK ITEM DESCRIPT	_	US MOD OUNT	MOD CHANGE AMOUNT	NEW MOD AMOUNT			
	b(4)						
This Modification deobligates funds in excess of the amount required to reimburse the Contractor for allowable cost and fee from the Base Period (Task Item 0001) and obligates funds to Option Period 1 (Task Item 0002). See the attached continuation page for details. The Contractor is required to sign this Modification acknowledging the amount obligated to the Base Period (Task Item 0001) is sufficient to reimburse the Contractor for Base Period cost and fee. FOR INQUIRIES REGARDING PAYMENT CONTACT: GSA Finance Customer Support 816-926-7287							
	PRIOR AMOUNT	-	NEW AMOUNT	INCREASE/DECREASE			
Cost To GSA:	b(4)						

AMENDMENT OF SOLICITATION/MC	DIFICATION OF	CONTRACT	1. CONTRACT IE	CODE	PAGE 1 OF 1 PAGE(S)
2.AMENDMENT/MODIFICATION NO. R1BK13090030 / P O 013	3.EFFECTIVE DATE 12/19/2011	4.REQUISITION A21764163	PURCHASE REC		. PROJECT NO. (if pplicable)
6. ISSUED BY GSA Region 1 Anthony W Pellegrino 10 Causeway Street Room 1085 Boston, MA 02222 United States (617) 565-5750			ED BY (If other tha		
8.NAME AND ADDRESS OF CONTRACTOR (N	lo., street, county, Sta	ate and ZIP Code)	9A NO.	AMENDME	ENT OF SOLICITATION
b (6) SOLERS INC. 950 N GLEBE RD STE 1100 ARLINGTON, VA 22203-1824 United States b(6)			9B. 10A CON GS-0 TYP	. MODIFICA NTRACT/O 06F-0654Z	RDER NO. / GST0110BK0047 DIFICATION:
CODE	FACILITY COD	E		. DATED (S 2/2011 12:0	SEE ITEM 11) 00 AM
11. THIS ITEM O	NLY APPLIES TO	AMENDMEN	TS OF SOLICI	TATIONS	3
The above numbered solicitation is amende	ed as set forth in item	14. The hour and	date specified for	receipt of (Offers
is extended is not extended.					
Offers must acknowledge receipt of this amendm following methods:	nent prior to the hour	and date specified	I in the solicitation	or as ame	nded, by one of the
(a) By completing items 8 and 15, and returning the offer submitted; or (c) By separate letter or to YOUR ACKNOWLEDGMENT TO BE RECEIVED AND DATE SPECIFIED MAY RESULT IN REJE already submitted, such change may be made by amendment, and is received prior to the opening	elegram which include D AT THE PLACE DE CTION OF YOUR OI y telegram or letter, p	es a reference to the SIGNATED FOR FER. If by virtue or ovided each telegon	ne solicitation and THE RECEIPT Of of this amendment	amendmer F OFFERS t your desir	nt numbers. FAILURE OF PRIOR TO THE HOUR te to change an offer
12.ACCOUNTING AND APPROPRIATION DATA 299X.A01VR110.F1.25.C01.H08	A (If required)				
13. THIS ITEM ONLY IT MODIFIES THE					
THIS CHANGE ORDER IS ISSUED PURSU CONTRACT ORDER NO. IN ITEM 10A.	JANT TO: (Specify A	uthority) THE CHA	NGES SET FOR	ΓΗ IN ITEM	1 14 ARE MADE IN THE
THE ABOVE NUMBERED CONTRACT/OR paying office, appropriation date, etc.) SET FOR					
THIS SUPPLEMENTAL AGREEMENT IS E	NTERED INTO PUR	SUANT TO AUTH	ORITY OF:		
OTHER (Specify type of modification and FAR 43.103(a)(1); FAR 52.232-22; FAR 52.232-20					
E. IMPORTANT: Contractor IS required to significant		I return copies to t	ne issuing office.		
14. DESCRIPTION OF AMENDMENT/MODIFIC feasible.)	ATION (Organized by	y UCF section hea	dings, including s	olicitation/c	contract matter where
ORDER MOD DATED:12/19/2011	Proposal Dated	:12/19/2011	Orde	er ID: R1BK	(13090030
PERFORMANCE PERIOD FROM: 08/05/2010	PERFORMANO 02/04/2012	E PERIOD TO:	Des	ired Deliver	ry Date:
ITEM TASK ITEM DESCRIPT	ION PREV	/IOUS MOD MOUNT	MOD CH AMOL		NEW MOD AMOUNT
	(4)				
L JI				1.000	(0) N 4007 W 60 1 1517
This Modification makes equitable adjustments folloequitable adjustment is made by funding the firm-fi adjustment is made to CLIN 1004 WA3 Ingest follo Track 2A (see Contractor's Request for Equitable A	xed price of CLIN 100 wing a negotiated cha	7 in the amount of nge order. CLIN 10	the or 04 is changed by a	der is chang adding the re	ged and equitable equirement of METOP B -

estimated cost and fee. Finally, this modification makes changes to the amount obligated to option year 1 award fee (award fee due and payable to date) date and changes to the amount obligated to the estimated cost of other direct costs all of which is set forth on the attached continuation page. FOR INQUIRIES REGARDING PAYMENT CONTACT:

F	PRIOR AMOUNT	NEW AMOUNT	INCREASE/DECREASE	
Cost To GSA:		b(4)		
Except as provided herein, all terms and conditions of and in full force and effect.	of the document re	eferenced in Item 9A or 10A, as heretofore char	nged, remains unchanged	
b(6)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Anthony W Pellegrino (617) 565-5750		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED 12/20/2011	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 12/20/2011	
(Signature of person authorized to sign)	Signature of person authorized to sign))	
NSN 7540-01-152-8070 Previous edition unusable		STANDARD FORM 30 (REV. 10-83) Prescribed by GSA FAR (48 CFR) 53.243		

AMENDMENT (OF SOLICITATION/MODIF	FICATION OF	CONTRACT	1. CONTRA	CT ID CODE		PAGE 1 OF 1
2.AMENDMENT/MO R1BK13090030 / P O		3.EFFECTIVE DATE 01/27/2012	4.REQUISITION A21764163	I/PURCHASE	E REQ. NO.	5. PRo	OJECT NO. (if able)
6. ISSUED BY GSA Region 1 Anthony W Pellegrino 10 Causeway Street F Boston, MA 02222 United States (617) 565-5750			7. ADMINISTER Anthony W Pelle			6)	
	ESS OF CONTRACTOR (No.,	street, county, St	ate and ZIP Code)	9A. AMEND	MENT (OF SOLICITATION NO
b(6) SOLERS INC. 950 N GLEBE RD STI ARLINGTON, VA 222 United States					TYPE OF M	ICATIO /ORDE IZ / GST ODIFIC ative Cha	N OF R NO. 0110BK0047
CODE		FACILITY COD	E		10B. DATED 12/20/2011 1		
	11. THIS ITEM ONL	Y APPLIES TO	O AMENDMEN	TS OF SO	LICITATIO	NS	
The above num	bered solicitation is amended a	s set forth in item	14. The hour and	l date specifi	ed for receipt	of Offer	rs
is extended C	is not extended.						
Offers must acknowle following methods:	edge receipt of this amendment	prior to the hour	and date specifie	d in the solic	itation or as a	mended	d, by one of the
the offer submitted; of YOUR ACKNOWLED AND DATE SPECIFI already submitted, su	ms 8 and 15, and returning _ cc or (c) By separate letter or telego DGMENT TO BE RECEIVED AT ED MAY RESULT IN REJECTI uch change may be made by tel eceived prior to the opening hou	ram which include T THE PLACE DE ON OF YOUR Of legram or letter, p	es a reference to the SIGNATED FOR FEER. If by virtue provided each tele	he solicitation THE RECE of this amen	n and amend IPT OF OFFE dment your d	ment nu RS PRI esire to	Imbers. FAILURE OF IOR TO THE HOUR change an offer
12.ACCOUNTING AI 299X.A01VR110.F1.2	ND APPROPRIATION DATA (If 5.C01.H08	required)					
	13. THIS ITEM ONLY AP IT MODIFIES THE CO						S.
THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.							
THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).							
THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
OTHER (Specify type of modification and authority) FAR 52,232-22 Limitation of Funds							
E. IMPORTANT: Contractor IS required to sign this document and return copies to the issuing office.							
14. DESCRIPTION C feasible.)	OF AMENDMENT/MODIFICATION	ON (Organized b	y UCF section he	adings, inclu	ding solicitation	on/contr	act matter where
ORDER MOD DATE	D:01/25/2012	Proposal Dated			Order ID: R1	BK1309	00030
PERFORMANCE PE 08/05/2010	RIOD FROM:	PERFORMANCE PERIOD TO: 02/04/2012		Desired Delivery Date:			
ITEM TAS	SK ITEM DESCRIPTION	III .	/IOUS MOD	11	CHANGI		NEW MOD
NO		A	MOUNT	A	MOUNT	<u> </u>	AMOUNT
b(4)							
This Modification decreases the value of Option Period 1 of the Task Order resulting from changes to Option Period 1 requirements. See the attached continuation page for details of the changes to Option Period 1 estimated cost. There is no change in the amount obligated to the Task Order. FOR INQUIRIES REGARDING PAYMENT CONTACT: GSA Finance Customer Support 816-926-7287							
COAT MANCE CUSTOM	···	PRIOR AMOUNT		N	EW AMOUNT	- 11	NCREASE/DECREASE
Cost To GSA:							

	b(4)			
Except as provided herein, all terms and conditions and in full force and effect.		referenced in Item 9A or 10A, as heretofore changed	d, remains unchanged	
15A. NAME AND TITLE OF SIGNER(Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Anthony W Pellegrino (617) 565-5750		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED 01/27/2012	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 01/27/2012	
(Signature of person authorized to sign)	01/21/2012	(Signature of person authorized to sign)	- 01/21/2012	
NSN 7540-01-152-8070 Previous edition unusable	•	STANDARD FORM 30 (REV. 1 Prescribed by GSA FAR (48 CFR) 5		

This Modification exercises the *Option to Extend the Term of the Contract* in accordance with FAR Clause 52.217-9 (MAR 2000). This Modification changes the Period of Performance, *Section F.3 Period of Performance* of the Task Order, as agreed to by the contractor and pursuant to FAR 43.103(a)(3) and the Changes Clause, FAR 52.243-2 Changes – Cost Reimbursement (AUG 1987) of the Task Order:

F.3 PERIOD OF PERFORMANCE

The term of this contract is set forth in the following table.

	PERIOD OF PERFORMANCE	GOVERNMENT FISCAL YEAR
Base Year	AUG 5, 2010 – FEB 4, 2011	FY10 – FY11
Option Period 1	FEB 5, 2011 – JAN 31, 2012	FY11 – FY12
Option Period 2	FEB 1, 2012 – JAN 31, 2014	FY12 – FY14
Option Period 3	FEB 1, 2014 – JAN 31, 2016	FY14 – FY16
Option Period 4	FEB 1, 2016 – JAN 31, 2018	FY16 - FY18

This Modification establishes the values of the several work assignments for Option Period 2 and funds Option Period 2 of the contract. See the attached continuation page for the values of the work assignments, the total Option Period 2 performance period, and the amount obligated to Option Period 2 of the contract.

AMENDMENT OF SOLICITATION/MOD	DIFICATION OF	CONTRACT	1. CONTRACT ID COD		PAGE 1 OF PAGE(S
2.AMENDMENT/MODIFICATION NO. R1BK13090030 / P. O 015	3.EFFECTIVE DATE 01/30/2012	4.REQUISITION A21764163	/PURCHASE REQ. NO.	5. PROJE applicable	CT NO. (If)
6. ISSUED BY GSA Region 1 Anthony W Pellegrino 10 Causeway Street Room 1085 Boston, MA 02222 United States (617) 565-5750,	je neodzetz		ED BY (If other than Item rino (617) 565-5750	16) ;	
8.NAME AND ADDRESS OF CONTRACTOR (No.	., street, county, St	ate and ZIP Code)	9A. AMENI	DMENT OF	SOLICITATION
SOLERS INC. 950 N GLEBE RD STE 1100			9B, DATED	(SEE ITEM	11)
ARLINGTON, VA 22203-1824 United States b(6)			10A. MODI CONTRAC GS-06F-06E TYPE OF M	FICATION C T/ORDER N 54Z / GST011 MODIFICATION Admin Char	OF O. IOBK0047 ON:
CODE	FACILITY COD	E		D (SEE ITEN	
11. THIS ITEM ON	LY APPLIES TO	AMENDMENT	S OF SOLICITATIO	NS	
The above numbered solicitation is amended is extended is not extended.	as set forth in item	14. The hour and	date specified for receipt	of Offers	
Offers must acknowledge recelpt of this amendment following methods:	nt prior to the hour	and date specified	in the solicitation or as a	mended, by	one of the
(a) By completing items 8 and 15, and returning _ of the offer submitted; or (c) By separate letter or tele YOUR ACKNOWLEDGMENT TO BE RECEIVED AND DATE SPECIFIED MAY RESULT IN REJECT already submitted, such change may be made by the amendment, and is received prior to the opening here.	gram which include AT THE PLACE DE FION OF YOUR OF elegram or letter, p	s a reference to the SIGNATED FOR TEER. If by virtue of the covided each telegone.	e solicitation and amend THE RECEIPT OF OFFE If this amendment your d	ment numbe RS PRIOR esire to char	rs. FAILURE OF TO THE HOUR age an offer
12.ACCOUNTING AND APPROPRIATION DATA 299X.A01VR110.F1.25.C01.H08	(If required)				
13. THIS ITEM ONLY A IT MODIFIES THE C					-
THIS CHANGE ORDER IS ISSUED PURSUA CONTRACT ORDER NO. IN ITEM 10A.	NT TO: (Specify Au	thority) THE CHAI	NGES SET FORTH IN IT	EM 14 ARE	MADE IN THE
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Except as provided herein, all terms and condition and in full force and effect.	s of the document	referenced in Item 9A or 10A, as heretofore char	nged, remains unchanged
154 NAME AND TITLE OF SIGNER(Type or prin	t)	16A. NAME AND TITLE OF CONTRACTING (Anthony W Pellegrino (617) 565-5750	DFFICER (Type or print)
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C, DATE SIGNED 01/31/2012	16B. UNITED STATES OF AMERICA b(6) (Signature of person authorized to sign)	16C. DATE SIGNED /·3/·20/2
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IT-Solutions Shop Page 1 of 2

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IT-Solutions Shop Page 2 of 2

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15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA Anthony W Pellegrino SIGNED 02/17/2012				
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IT-Solutions Shop Page 1 of 2

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15A. NAME AND TITLE OF SIGNER(T	Type or print)	16A. NAME AND TITLE OF CONTRACTING Anthony W Pellegrino	G OFFICER (Type or print)		
5B. CONTRACTOR/OFFEROR 15C. DATE SIGNED 03/02/2012		16B. UNITED STATES OF AMERICA Anthony W Pellegrino 16C. DATE SIGNED 03/02/2012			
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15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 10/04/2012		
(Signature of person authorized to sign)	_	(Signature of person authorized to sign	i)		
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Revised Proposal in Response to Changes Required to Work Assignment 2

- National Polar Partnership (NPP) Data Exploitation (NDE) on
Environmental Satellite Processing and Distribution System
Development Services (ESPDS)

PREPARED FOR:

General Services Administration 10 Causeway Street, Room 1085 Boston, MA 02222 Attn: Anthony W. Pellegrino

PREPARED BY:

Solers, Inc.
950 North Glebe Road, Suite 1100
Arlington, VA 22209
(703) 526-0001
www.solers.com

19 September 2012

RESTRICTED NOTICE: The information/data furnished in this proposal constitutes a trade secret and/or information that is commercial or financial and confidential or privileged. It is furnished with the understanding that it will not, without permission of the offeror, be disclosed for other than evaluation purposes, however, that in the event a contract is awarded on the basis of this proposal or quotation the offeree shall have the right to use this information/data to the extent provided in the contract. This restriction does not limit the offeree's right to use or disclose this information/data from another source without restriction. The data that is subject to this restriction is contained in sheets marked with "Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal."

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I NDE Change Order Technical Overview

Suomi National Polar Partnership (NPP) represents a step-function increase in polar-orbiting environmental satellite observing capabilities for the National Oceanic and Atmospheric Administration (NOAA) and its partner agencies. During the preceding decade, as polar environmental satellite planning has progressed, the Nation has become far more attuned to the data needs of weather forecasters, climate change analysts, and others demanding detailed and objective global environmental observations. NOAA has taken the necessary steps to prepare for the needs of developers, scientists, and end-users of NPP information through the NDE program. The message is clear: when NPP is put into operation, the historical lag time between research and operations for new and improved products must be abbreviated wherever possible.

When completed, the NDE system will allow for accelerated use of valuable NPP products. The first three of five functional subsystem builds – Ingest, Production, and Distribution – were completed for the Initial Distribution Capability 3-months prior to the projected launch date of late October 2011. Through this contract, Team Solers has completed the subsystem functionality already developed, ensuring continuity of that development toward stated agency deadlines, and rigorously preparing for completion of the remaining two subsystems and the entire integrated NDE system.

The following sections outline Team Solers strategy for completing four (4) change orders required to work assignment 2 - NDE. The four change orders are as follows:

- 1. Change 1: The contractor shall provide sustainment support on a twenty-four (24) hours per day, seven (7) days per week, strictly on-call basis with two (2) hour response time to NDE systems that ingest, process and distribute operational satellite products. This change will support a NOAA requirement to make NPP satellite products available to users on an operational basis prior to the transition of NDE operational system responsibilities to the Office of Satellite and Product Operations (OSPO) in 2013. The Environmental Satellite Processing Center (ESPC) Help Desk will receive technical support from the contractor to resolve NDE system anomalies. Start Date: Specified in the Modification/Supplemental Agreement resulting from this Change Order. Assume an August 20, 2012 start date for estimating the cost/price of performance. End Date: April 30, 2013.
- 2. Change 2: The contractor shall deliver NDE system documentation complying with the Documentation Standard Guidelines approved by the NESDIS Satellite Products and Services Review Board (SPSRB). The documentation format shall be online via a collaboration tool provided by the Government. Start Date: Specified in the Modification/Supplemental Agreement resulting from this Change Order. End date: Specify in Request for Equitable Adjustment for inclusion in the Modification/Supplemental Agreement resulting from this Change Order.
- 3. Change 3: The contractor shall specify, install, integrate, test, and transition to OSPO a second NDE operational processing system. Start Date: Specified in the Modification/Supplemental Agreement resulting from this Change Order. End date: Not later than seven (7) months after task award.
- 4. Change 4: The contractor shall work with environmental satellite product algorithm developers to integrate Delivered Algorithm Packages (DAPs) with the NDE Data Handling System (DHS), develop production rules for tailoring products, and assist with evaluation and testing of products. (This Change results from an increase in government

requirements). Start Date: Specified in the Modification/Supplemental Agreement resulting from this Change Order. End date: August 4, 2013.

II Change 1: On-Call Sustainment Support

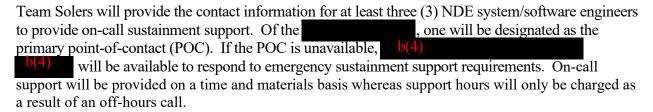
Team Solers will provide sustainment support on a twenty-four (24) hours per day, seven (7) days per week, strictly on-call basis with two (2) hour response time to NDE systems that ingest, process and distribute operational satellite products. This change will support a NOAA requirement to make NPP satellite products available to users on an operational basis prior to the transition of NDE operational system responsibilities to OSPO in 2013. The ESPC Help Desk will receive technical support from Team Solers to resolve NDE system anomalies.

Team Solers will provide the contact information for at least who will be on-call at all times. Off-hour calls will be responded to within two (2) hours of receipt. As part of the response, the Team Solers engineer handling the response will provide a written assessment of the problem and resolution to the NDE PM within one (1) day of the incident including the number of hours required to resolve the issue. On-call sustainment support will start at task award and continue until April 30, 2013.

II.1 Change 1: Milestones

There are no specific milestones associated with on-call sustainment support other than Team Solers will respond to customer calls within two (2) hours of receipt followed by a written report of the cause of the incident and incident resolution.

II.2 Change 1: Staffing by FTE



III Change 2: NESDIS Satellite Products and Services Review Board (SPSRB) Documentation Guidelines

Team Solers will deliver NDE system documentation complying with the Documentation Standard Guidelines approved by the NESDIS SPSRB. The documentation format will be online via a collaboration tool provided by the Government. Documentation conversion support will start at task award and complete once the final document has been delivered to the customer. The following documents will be applicable for the SPSRB guidelines:



All required documentation will be delivered prior to system turnover to OSPO and the completion of the Operational Readiness Review (ORR).

III.1 Change 2: Milestones

The following milestones will be will be used for delivery of maintenance and user documentation in the SPSRB format. These dates are derived from the original RFP document NOAA-ESPDS-CDRL-F-008 (CDRL list) and OSPO operational need dates.

Document	Date
Software Design Document (SW5)	Initial: ORR – 60 days
	Final: ORR – 30 days
Software User Manual(s)(SW7)	Initial: ORR – 60 days
	Final: ORR – 30 days
Operations and Maintenance Manuals (TO2)	Initial: ORR – 60 days
	Final: ORR – 30 days

III.2 Change 2: Staffing by FTE

Team Solers will provide a transition to operations (TO) documentation specialist (1 FTE) to convert required documentation to the SPSRB format. Documentation that has already been written and delivered in a different format will start to be converted at task award. Other documentation that has not yet been written will be converted and provided in the SPSRB format with the documentation delivery. Part time configuration management (CM) support will also be provided in order to maintain configuration control of all documentation delivered to the customer until formal turnover of the system to OSPO.

IV Change 3: Second NDE Operational Processing System

Team Solers will specify, install, integrate, test, and transition to OSPO a second NDE operational processing system. The task will start at task award and complete approximately seven (7) months after task award. The following subtasks will be performed as part of this task:

- Team Solers will generate a proposed bill of materials (BOM) for the second NDE operational processing system and submit it to the Governments System Engineering (SE) Integrated Product Team (IPT) for review and comment. Team Solers will support the SE IPT and answer any questions regarding the BOM and make changes as required. Part of the BOM generation process will be the solicitation of quotes from prospective material vendors in order to provide a cost estimate to the Government. Once approved, the BOM will be sent to the GSA Contractor Officer (CO) for approval and a request for quote will be sent to Team Solers.
- 2. Once the RFQ is received, Team Solers will refresh the material quotes and submit a procurement package to the GSA CO for approval to purchase. The procurement package will contain quotes from at least three (3) qualified vendors where available along with Team Solers recommendations for selected vendors. After approval is received from the CO, Team Solers will generate and submit purchase requests to the selected material vendors.
- 3. The material for the second NDE operational processing system will be shipped directly to the NSOF, where all material will be tagged and documented within the NOAA property management system. Once an inventory has been completed, hardware will be moved into the data center and placed according to the facilities plan for the second NDE operational processing system.
- 4. Once in the data center, hardware will first be placed into its designated rack and power cabling will be installed. When ready, hardware will be powered up and equipment diagnostics will be run to verify equipment is operating nominally.
- 5. After the hardware is checked out, software will be installed starting with operating systems (as required), COTS software, and finally custom software. Software will be configured as required to perform as the second NDE operational processing system. At this time, data cables will be run in anticipation of connection within the ESPC environment. The system will not be connected to the ESPC until a security audit is performed and the system is given authorization to connect into the environment. During this time, the system is also thoroughly tested to verify it is operating as designed prior to connection into the operational environment.
- 6. After security has approved the system and an authorization to connect is received, the system is connected into the operational environment and again thoroughly tested to verify and operational requirements at which point a final authorization to operate is solicited and received from the Government.

IV.1 Milestones

With an estimated Award Date of September 21, 2012, Solers proposes the following revised milestones for installation, configuration, testing and transition of a 2nd NDE operational processing environment. Note – dates are subject to change based on actual task award. Post testing support in April 2013 has been removed from original quote.

Milestone	Date
Task Award	September 21, 2012
Initial BOM Submitted for Review and Approval	October 12, 2012
Final BOM Submitted for Review and Approval	November 2, 2012
Request for Quotes received by CO	November 9, 2012
Request to Purchase provided to CO	November 21, 2012
Purchase Request received by CO / Purchase Initiated	November 30, 2012
Hardware/Software Received at NSOF	January 4, 2013
Hardware Installed at NSOF	January 7, 2013 – January 25, 2013
Software Installed and Configured at NSOF	January 28, 2013 – February 22, 2013
Integration and Testing Prior to Connection to ESPC	February 25, 2013 – March 15, 2013
Integration and Testing After Connection to ESPC	March 18, 2013 – March 29, 2013
Transition to OSPO	March 29 th , 2013

IV.2 Staffing by FTE

Major Task	Staffing (FTE)		
Procurement & Site Preparation			
Hardware Installation		b(4)	
Software Installation			
Integration and Testing			

Team Solers recommends this task be accomplished as a cost-plus, award fee task due to the number of external dependencies that could impact the delivery schedule including:

- 1. Length of time required to complete procurement Material procurements tend to take longer than anticipated due to the number of approvals required prior to executing the procurements. Approvals can be delayed for a number of reasons outside of the control of the development contractor.
- 2. Length of time required to receive authority to connect (ATC) ATC is dependent on receiving authority to connect from OSPO as well as NOAA security and is outside of the control of the development contractor.

3. Length of time required to receive authority to operate (ATO). Again, ATO is dependent on receiving authority to operate from OSPO as well as NOAA security and is outside of the control of the development contractor.

V Change 4: Delivered Algorithm Packages (DAP) Integration

Team Solers will work with environmental satellite product algorithm developers to integrate DAPs with the NDE DHS, develop production rules for tailoring products, and assist with evaluation and testing of products. (This Change results from an increase in government requirements). Start date for this task will be task award and the end date will be August 4, 2013. The following subtasks will be provided in support of this change order:

- Support product IPT (pIPT) with b(4)
 Support external user Technical Interface Meetings (TIMs)
 Check newly delivered DAP into Configuration Management (CM)
 b(4)
 Test integrated DAP
 b(4)
 Con irm output with DAP developer
- Promote DAP to test environmentSupport test engineers with DAP testing



V.1 Change 1: Milestones

There are no specific milestones associated new DAP integration other than the steps outlined in Section V above. The time it takes from initial DAP delivery to transitioning into operations is dependent on several factors including:

- 1. Complexity of DAP being delivered
- 2. Number of input data files required
- 3. Maturity of DAP at delivery

In general, the time it takes to transition a new DAP into operations after its initial delivery has historically taken anywhere from two $(2) - \sin(6)$ months.

V.2 Change 1: Staffing by FTE

Major Task	Staffing (FTE)
DAP Integration	b(4)
DAP Testing & Evaluation Support	0(4)

VI Abbreviations and Acronyms

ATC Authority to Connect ATO Authority to Operate

CM Configuration Management

CO Contracting Official

DAP Delivered Algorithm Package

DHS Data Handling System
DSS Data Selection Service

ESPC Environmental Satellite Processing Center

ESPDS Environmental Satellite Processing and Distribution System

FTE Full-Time Equivalent

NDE NPOESS Data Exploitation

NOAA National Oceanic and Atmospheric Administration NPOESS NOAA Polar Orbiting Environmental Satellite System

NSOF NOAA Satellite Operations Facility

ORR Operational Readiness Review

OSPO Office of Satellite and Product Operations

POC Point of Contact

SPSRB Satellite Products and Services Review Board

TIM Technical Interface Meeting
TO Transition to Operations

XML Extensible Markup Language

IT-Solutions Shop Page 1 of 2

AMENDMENT OF SOLICITATION/MODII	FICATION OF	CONTRACT	1. CONTRACT ID	CODE	PAGE 1 OF 1 PAGE(S)
2.AMENDMENT/MODIFICATION NO. R1BK13090030 / P O 019	3.EFFECTIVE DATE 10/15/2012	4.REQUISITION A21764163	PURCHASE REQ		PROJECT NO. (if oplicable)
6. ISSUED BY GSA Region 1 Anthony W Pellegrino 10 Causeway Street Room 1085 Boston, MA 02222 United States (617) 565-5750	10/13/2012		ED BY (If other tha prino (617) 565-5750		
8.NAME AND ADDRESS OF CONTRACTOR (No.	, street, county,	State and ZIP Cod	9A. Al	MENDME	NT OF SOLICITATION
SOLERS INC. 950 N GLEBE RD STE 1100 ARLINGTON, VA 22203-1824 United States b(6) 9B. DATED (SEE ITEM 11) 10A. MODIFICATION OF CONTRACT/ORDER NO. GS-06F-0654Z / GST0110BK004 TYPE OF MODIFICATION: A. Amount Change					ATION OF RDER NO. 'GST0110BK0047 IFICATION:
CODE	FACILITY COL	DE		DATED (S 2012 12:0	SEE ITEM 11) 10 AM
11. THIS ITEM ONLY	APPLIES TO	AMENDMEN	TS OF SOLICIT	ATION	S
The above numbered solicitation is amended	as set forth in ite	em 14. The hour a	nd date specified fo	or receipt	of Offers
is extended is not extended.					
Offers must acknowledge receipt of this amendmen following methods:	nt prior to the ho	ur and date specif	ed in the solicitation	n or as a	mended, by one of the
(a) By completing items 8 and 15, and returning _ copy of the offer submitted; or (c) By separate lette FAILURE OF YOUR ACKNOWLEDGMENT TO BE TO THE HOUR AND DATE SPECIFIED MAY RES change an offer already submitted, such change m the solicitation and this amendment, and is receive	r or telegram wh RECEIVED AT ULT IN REJECT ay be made by to d prior to the ope	ich includes a refe THE PLACE DES TION OF YOUR O elegram or letter,	erence to the solicit SIGNATED FOR TH FFER. If by virtue oprovided each telegon	ation and HE RECE of this am	amendment numbers. IPT OF OFFERS PRIOR endment your desire to
12.ACCOUNTING AND APPROPRIATION DATA (299X.A01VR110.F1.25.C01.H08	If required)				
13. THIS ITEM ONLY APF IT MODIFIES THE CO					_
THIS CHANGE ORDER IS ISSUED PURSUA THE CONTRACT ORDER NO. IN ITEM 10A.	NT TO: (Specify	Authority) THE C	HANGES SET FOR	RTH IN IT	EM 14 ARE MADE IN
THE ABOVE NUMBERED CONTRACT/ORDE in paying office, appropriation date, etc.) SET FOR					
THIS SUPPLEMENTAL AGREEMENT IS ENT	ERED INTO PU	IRSUANT TO AU	THORITY OF:		
OTHER (Specify type of modification and at FAR 43.103(a) - Supplemental Agreement	uthority)				
E. IMPORTANT: Contractor IS required to sign		•			
14. DESCRIPTION OF AMENDMENT/MODIFICAT feasible.)	TON (Organized	by UCF section h	eadings, including	solicitatio	n/contract matter where
ORDER MOD DATED:10/15/2012	Quote Dated:1				13090030
PERFORMANCE PERIOD FROM: 08/05/2010	01/31/2014	CE PERIOD TO:	Desire	ed Deliver	y Date:
ITEM TASK ITEM DESCRIPTION NO	III .	IOUS MOD MOUNT	MOD CHAI AMOUN		NEW MOD AMOUNT
	1 (4)				
	b(4)				
This Curplemental Agreement purposest to Continue 4.4.0 of the Obstancest of West and Outstand 4.4.0 of the Continue 4.4.0 of the Co					
This Supplemental Agreement, pursuant to Section 1.4.2 of the Statement of Work and Subpart 43.103 of the Federal Acquisition Regulation, adds requirements to Work Assignment #2 - NDE. The total value of the added requirements is detailed on the attached continuation pages. This modification obligates funding to the added requirements as detailed on the attached continuation pages. Task 1 of the added requirements is a labor-hour task, Tasks 2-4 inclusive are cost-plus award fee (ref. FAR 52.232-22). Reference the contractor's technical and cost proposals dated September 19, 2012.					
FOR INQUIRIES REGARDING PAYMENT CONTA GSA Finance Customer Support 816-926-7287					
P	RIOR AMOUNT		NEW AM	OUNT	INCREASE/DECREASE

IT-Solutions Shop Page 2 of 2

Cost To GSA:	b(4)				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER(Type o	r print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print Anthony W Pellegrino (617) 565-5750			
15B. CONTRACTOR/OFFEROR (4)	15C. DATE SIGNED 10/16/2012	16B. UNITED STATES OF AMERICA Anthony W Pellegrino	16C. DATE SIGNED 10/16/2012		
(Signature of person authorized to sign)	(Signature of person authorized to sign)			
NSN 7540-01-152-8070 Previous edition unusable		STANDARD FOR Prescribed by GSA FA			



Environmental Satellite Processing and Distribution System (ESPDS) Development

Contract Data Requirements List

Version 2.0

October 2012





U.S. Department of Commerce (DOC) National Oceanic and Atmospheric Administration (NOAA) National Environmental Satellite, Data, and Information Service (NESDIS)

CHANGE RECORD

DOCUM	DOCUMENT TITLE: ESPDS Development Contract Data Requirements List						
VERSION	DATE	PAGES AFFECTED	DESCRIPTION				
0.1	29 May 09	All	Draft				
0.2	13 Aug 09	All	Project Team Comments including SOW comments				
0.3A	2 Oct 09	1-19	Project Team Review of Introduction				
0.3B	5 Oct 09	14, 69-81	Project Team Review of SE				
0.3C	7 Oct 09	11-20, 49-50, 82-91, 95-110	Project Team Review of SE, HW, SW, IT, FM, and RE				
0.3D	8 Oct 09	13, 23, 53-55, 61, 65-70, 93-96, 114-129	Project Team Review of RE, TO, IS, QA, RM, and CC				
0.3E	9 Oct 09	7, 20-63	Project Team Review of CC and PM				
0.4	19 Oct 09	All	Incorporation of Action Items				
0.5	23 Oct 09	All	Updated DIDs (SE 8, SW 6); added submission rqt (IS 4); accepted edits and removed comments for draft RFP package				
0.6	13 Nov 09	All	GOES-R Comments & Review				
1.0	17 Nov 09	All	Final				
1.1	22 Jul 10	8	Implemented change 79				
1.2	24 Aug 10	RE 3	Implemented change 77; fixed table 7 format error				
1.3	13 July 11	7, 8, 10, 11, 12, 66	Implemented change 119, 120, 125, 141, 158, 166,				
1.4	10 October 11	6, 8, 9, 10	Implemented Change 182				
1.5	1 December 11	8, 75, 109, 110	Implemented Changes 209, 211, 212				
1.6	7 May 12	5, 8, 9, 10, 11, 54	Implemented Changes 239, 244, 249, 255, 256, 257, 258				
1.7	10 July 12	9, 10, 49, 70, 71	Implemented Changes 267 and 268				
1.8	10 Aug 12	1, 3, 94	Implemented Changes 285, 288				
1.9	24 Aug 12	75-78	Fully implemented change 211, updating all 7123.1 to include A				
2.0	1 Oct 2012	7, 12, 13, 41, 94, 97, 98	Implemented changes 290, 291, 298, 299				

The document version number identifies whether the document is a working copy, final, revision, or update, defined as follows:

- Working copy or Draft: a document not yet finalized or ready for distribution; sometimes called a draft. Use 0.1A, 0.1B, etc. for unpublished documents.
- Final: the first definitive edition of the document. The final is always identified as Version 1.0.
- **Revision:** an edition with minor changes from the previous edition, defined as changes affecting less than one-third of the pages in the document. The version numbers for revisions 1.1 through 1.9, 2.1 through 2.9, and so forth. After nine revisions, any other changes to the document are considered an update. A revision in draft, i.e. before rebaseline, should be numbered as 1.1A, 1.1B, etc.
- **Update:** an edition with major changes from the previous edition, defined as changes affecting more than one-third of the pages in the document. The version number for an update is always a whole number (Version 2.0, 3.0, 4.0, and so forth).

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1. INTRODUCTION

This document provides the Contract Data Requirements List (CDRL) of the Data Items (DI) that **shall** be provided by the ESPDS Development contractors as data deliverables in support of the Environmental Satellite Processing Center (ESPC) upgrades and new developments.

- Section 1.0 includes the introduction and the description of the CDRL document.
- Section 2.0 provides definitions for the identification, delivery and acceptance of the CDRL DIs.
- Section 3.0 provides a summary listing of the CDRL DIs with the related identification number, proposal inclusion, acceptance, and submission information.
- Section 4.0 provides the Data Item Descriptions (DIDs) for each CDRL DI listed in section 3.0.

2. IDENTIFICATION, REFERENCE, DELIVERY, AND ACCEPTANCE

The transmittal letter and/or email for all deliverables **shall** be addressed to the Contracting Officer (CO) at:

Anthony W. Pellegrino ESPCA - Federal Acquisition Service 10 Causeway Street - Room 1085 Boston, MA 02222 (617) 565-5750 (617) 565-5748 - Fax (617) 312-7266 - Cell

And to the Contracting Officer's Representative (COR) at:

Angelo Wade Suitland Federal Center 4231 Suitland Road Building: NSOF Routing Code: E/OSD3 Suitland, MD 20746 (301) 817-3802 (301) 817-4403 – Fax

The following definitions and instructions apply to Table 2 through Table 12.

2.1. ID

The ID column identifies the Data Item by functional category and a sequential number within that category. The data item prefixes and the associated functional categories are listed in Table 1.

Table 1- Data Item Prefix and Associated Functional Category

Data Item Prefix	Functional Category			
PM	Program Management			
FM	Financial Management			
CC	Integrated Change Control			
IS	Information Security			
SE	System Engineering			
RE	Review Packages			
HW	Hardware			
SW	Software			
IT	Integration and Test			
ТО	Transition to Operations			
QA	Quality Assurance			

2.2. Title

The CDRL Title describes the required data, or document that is traceable to specific elements of the functional category breakdown structure.

2.3. Contract Submission

Submission information includes:

2.3.1. Maturity Information

Initial submission: The first submission of an item for approval, review, or information. To be completed with available information as of the time of preparation for the due date.

Updated submission: The best, up-to-date information available at the time. Data item updates **shall** require the same "approval/review" process as was required for the previous submissions.

Final submission: The complete thorough submission of an item for approval, review, or information.

Task order submission: Because ESPDS will have multiple Work Assignments (WA) active at any one time, there will be multiple SDRs, PDRs, deliveries, test schedules, and other development artifacts. Their initial and final task order submission dates will be determined by the Government on a WA basis, and as documented in the ESPDS Integrated Master Schedule.

2.3.2. Additional Definitions

Meaning of terminology used in CDRL is as follows:

The term "ESPC" refers to the Environmental Satellite Processing Center that will operate and maintain the final products and deliverables following the transition to operations.

The term "ESPDS" refers to the Environmental Satellite Processing and Distribution System project and project deliverables. ESPDS is being developed by OSD.

The term "shall" designates a requirement. The terms "will" and "is" designate statements of fact.

The term "(TBS)" means "to be supplied," and its use identifies missing or incomplete information, values, or data needed to fulfill a requirement.

The term "(TBD)" means "to be determined" and identifies a missing requirement.

The term "(TBR)", means "to be refined/reviewed" and indicates that the requirement is subject to review for appropriateness and subject to revision.

Refer to the Statement of Work for the Government and contractor responsibilities associated with TBSs, TBDs, and TBRs.

The term "DACA" means "days after task order award".

The term "Quarterly" means the Government's fiscal year quarters. Submissions are to be provided by January 15th, April 15th, July 15th, and October 15th or as modified by the CO.

The term "Monthly" means monthly by the 15th of each month or as required or modified by the CO.

The term "Bi-weekly" means submitted every 2 weeks by Tuesday close of business or as modified by the CO.

The term "Weekly" means submitted weekly by Friday close of business or as modified by the CO.

The term "Days" means, unless indicated otherwise, calendar days.

The term "POP" means Period of Performance.

The term "As Generated" means after each initial edition, revision, and addition. As Generated items that are critical to schedule, performance, or interface **shall** be transmitted to the ESPDS Project within 48 hours of generation.

The term "As Required" means items updated and delivered at the direction of the CO or as specified in the data item requirements.

The term "sustainment" means post-delivery-pre-acceptance support. This includes development (modifications, enhancements), testing, and anomaly resolution (bug-fixes) support for all delivered systems during the period after the initial delivery and before the acceptance of the system.

The term "BY" means Budget Year.

The term "WA" means Work Assignment.

The terms KTR and K mean the development contractor.

The terms Gov and G mean the Government.

The term B&W refers to black and white print.

2.3.3. Delivery Format

Unless otherwise indicated under Hard Copy, all data items **shall** be delivered in electronic format.

Electronic deliverables **shall** be delivered in the following formats unless otherwise specified in the data item description or approved by the CO:

- a) Text Documents: Microsoft Word 2003
- b) Presentations: Microsoft PowerPoint 2003
- c) Spreadsheets: Microsoft Excel 2003
- d) Database: Delimited ASCII files accompanied by either database schema document defining tables and entries or XML schema and tagged definitions
- e) Schedules: Microsoft Project 2003
- f) Schematics and Drawings: Portable Document Format (PDF) and Microsoft Visio 2003
- g) Photographs: JPEG or current industry standard
- h) Video: Any readily available open standard (e.g., AVI, MPEG)

For hardcopy deliverables, the number of copies is indicated in the Hard Copy column.

All hardcopy deliverables **shall** be delivered to the COR:

Angelo Wade

Suitland Federal Center

4231 Suitland Road

Building: NSOF Routing Code: E/OSD3

Suitland, MD 20746

Hard Copy includes data that is typed, drawn or printed on paper by common conventional practices. If printed copies are required, they **shall** be produced from the original, the record copy, or a reproducible equivalent.

2.4. Acceptance Code

The following codes apply to all submissions of the CDRL data items (i.e., initial, final, and updates) as identified in Table 2 through Table 12.

A –Approval: Documents in this category **shall** require submission to the Government within the time specified. The Government will act on items requiring approval within 30 days of receipt of the item.

Documents in the Approval category **shall** require written approval prior to Contractor implementation unless greater than 30 days have elapsed since Government receipt of the item and no written response has been received. Requirements for data item resubmission and/or conditional use will be as specified in letter(s) of disapproval.

R –Review: Documents in the Review category **shall** be submitted to the Government within the time period specified, and will be subject to evaluation.

Review category documents **shall** be implemented upon issuance unless otherwise noted.

When an evaluation reveals inadequacies in a Review document, the Contractor **shall** correct the document as specified.

I –Information: Documents in this category will be used by the Government to determine current project status and progress and for future planning requirements.

2.5. Format

The contractor **shall** produce document deliverables containing a table of contents providing the number, title, and page number of the titled paragraph and subsequent appendices to a level adequate to assist the reader in locating the desired information. Each paragraph of the deliverable need not be included. The table of contents **shall** contain the number, title, and page number for each figure and table presented.

The contractor **shall** produce for data in a database or other alternative form, information consisting of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.

The contractor shall include a DID Compliance Matrix with all deliverables that shows where in a deliverable DID criteria are satisfied. The DID Compliance Matrix will be detailed to a level adequate to assist the reader in locating the desired information.

The contractor **shall** produce deliverables including a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.

Unless otherwise specified in the individual Data Item Description, contractor format is acceptable.

2.5.1. Documentation Control Procedures

The contractor **shall** submit documentation to document control according to the guidelines established in the ESPDS Development Document Management Plan.

The contractor **shall** track changes to indicate changes or updates.

2.5.2. Document Markings

The contractor **shall** mark documents containing materials or information covered and controlled by International Traffic in Arms Regulations (ITAR) or Export Administration Regulations (EAR), as determined by the contractor, on the cover and on pages containing such materials.

The contractor **shall** mark documents containing contractor proprietary materials or information, as determined by the contractor, on the cover and on pages containing such materials.

The contractor **shall** not unnecessarily or unjustifiably mark documents with restrictive or limiting labels, nor **shall** such labeling be applied frivolously or indiscriminately.

Table 2 through Table 12 are the Contract Data Requirements List. The Government reserves the right to modify any Data Item Description to improve the quality and timeliness of deliverables.

Work Assignment Applicability Level: Identifies data items applicable to specific ESPDS WAs. Unless otherwise specified by the Government, all data items tagged as WA Requirements will be included as part of a WA.

ESPDS Enterprise Applicability Level: Identifies data items applicable to overall ESPDS systems engineering and project management. The ESPDS Enterprise data items are common to and apply to all WAs.

See Section 2.3.2 for an explanation of additional terms.

Table 2- Project Management

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
PM 1	Project Management Plan (PMP)	ESPDS Enterprise	Initial: Task Order Award + 30 days	•	A
			Final: Task order Award + 90 days		
			Updates: For new WAs and Annually by June 1st		
PM 2	Integrated Master Plan (IMP)	ESPDS Enterprise	Initial: Task Order Award + 30 days		A
			Final: IBR + 30 days		
			Updates: For new WAs and as required		
PM 3	Handover Approach Plan	Work Assignment	Initial: WA Award + 30 days		A
			Final: WA Award + 90 days		
PM 4	Handover Recommendation Plan	Work Assignment	Initial: Task Order Completion - 90 days		R
			Final: Task Order Completion - 30 days		
PM 5	Meeting Minutes	Work Assignment	Final: Meeting + 1 week		R
			Updates: As required		
PM 6	Task Order and Work Assignment Closure	ESPDS Enterprise and	Initial: Task Order or WA Completion - 90 days		A
	Plans	Work Assignments	Final: Task Order or WA Completion - 30 days		
PM 7	Integrated Master Schedule	ESPDS Enterprise	Initial: Task Order Award + 30 days		A
			Final: IBR + 30 days		
			Updates: For new Deliveries and monthly through POP		
PM 8	Status Reports	ESPDS Enterprise and	Final: Every week through POP		I
		Work Assignments			
PM 9	Project Management Status Review	ESPDS Enterprise	Initial: IBR + 30 days		I
	(PMSR) Data Package		Final: Every month through POP		
PM 10	Integrated Baseline Review (IBR) Data	SPDS Enterprise	Final: IBR – 2 weeks		R
	Package		Updates: As required for baseline changes and updates		
PM 11	Earned Value Management System	ESPDS Enterprise	Final: IBR – 2 weeks		R
	(EVMS) Plan	•	Updates: Annually by August 1st		
PM 12	Contract Performance Report (CPR)	ESPDS Enterprise	Initial: IBR + 30 days		R
		1	Updates: Monthly through POP		
PM 13	Personal Property Management Plan	ESPDS Enterprise	Final: Task Order Award + 30 Days		R
		•	Updates: For new WAs and as required		
PM 14	Personal Property Inventory	ESPDS Enterprise	Final: One month after Task Order Award		I
		•	Updates: Annual and per new WA		
PM 15	Work Breakdown Structure (WBS)	ESPDS Enterprise	Initial: Task Order Award + 30 days		A
		•	Final: IBR + 30 days		
			Updates: As required		

¹ Hard Copy: indicates number of hardcopies to be delivered. Unless indicated, hardcopies are in addition to electronic submission.

Table 3- Financial Management

ID	Title	Applicability Level	Task order Submission	Hard	Acceptance
				Copies ¹	Code
FM 1	Contract Funds Status Report	ESPDS Enterprise	Initial: IBR + 60 days		R
			Updates: Quarterly		

Table 4- Integrated Change Control

ID	Title	Applicability Level	Task order Submission	Hard	Acceptance
				Copies ¹	Code
CC 1	Document Tree	ESPDS Enterprise	Initial: Initial SRR – 2 weeks		I
			Final: Initial ORR – 2 weeks		
			Updates: Quarterly and at the SRR, PDR, and CDR		
CC 2	Specification Tree	ESPDS Enterprise	Initial: Initial PDR – 2 weeks		R
			Final: Initial ORR – 2 weeks		
			Updates: Quarterly and at the SRR, PDR, and CDR		
CC 3	Change Requests (CR)	ESPDS Enterprise	Final: As Generated		Class I – A
					Class II – I
CC 4	Configuration Item Identification List	ESPDS Enterprise	Initial: Initial PDR – 2 weeks		R
			Final: Initial ORR – 2 weeks		
			Updates: Quarterly and at the SRR, PDR, and CDR		
CC 5	Configuration Item Control Board	ESPDS Enterprise	Initial; Meeting – 1 week		I
	Documentation		Final: Meeting + 1 week		
CC 6	Engineering Deviations and Waivers	ESPDS Enterprise	Updates: As approved		A
		-			
CC 7	Configuration Management Plan	ESPDS Enterprise	Initial: CA + 30 days		A
			Final: CA + 90 days		
CC 8	Anomaly Tracking List	ESPDS Enterprise	Final: Every two weeks through POP		I

¹ Hard Copy: indicates number of hardcopies to be delivered. Unless indicated, hardcopies are in addition to electronic submission.

Table 5 – Information Security

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
Error! Reference source not found.IS 1	Developmental Sub-IS 1 Developmental Subsystem (Security) Plan	ESPDS Enterprise	Initial: Task Order Award + 30 days Final: Task order Award + 90 days Updates: As required for each WA	•	A
IS 1	E-Authentication Package	ESPDS Enterprise	Initial: PDR – 2 weeks Final: WA Completion – 3 months Updates: As required by the DID		A
IS 2	Privacy Threshold Analysis/ Privacy Impact Assessment	ESPDS Enterprise	Final: Task Order Award + 30 days Updates: As required for each WA		A
IS 3	Security Authorization Inputs	ESPDS Enterprise	Initial: Task Order Award +14 days Final: As determined by ISSO Updates: Annually		A

Table 6— Systems Engineering

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
SE 1	Systems Engineering Management Plan (SEMP)	ESPDS Enterprise	Initial: Task Order Award + 30 days		A
			Final: Task order Award + 90 days		
			Updates: As required		
SE 2	'To Be' Architecture	ESPDS Enterprise	Initial: Initial SDR – 3 weeks		A
			Final: Initial PDR – 3 weeks		
			Updates: Initial CDR – 3 weeks, every WA SDR, PDR,		
			CDR and as required		
SE 3	Operations Concept	ESPDS Enterprise	Initial: PDR – 2 weeks		A
			Final: CDR – 2 weeks		
			Updates: Initial CDR – 3 weeks, every WA SDR, PDR,		
			CDR and as required		
SE 4	Requirements Specifications	Work Assignment	Initial: WA SDR – 3 weeks		A
			Final: WA PDR – 3 weeks		
			Updates: As required		
SE 5	Interface Requirements Specification (IRS)	Work Assignment	Initial: WA PDR – 3 weeks		A
			Final: WA CDR – 3 weeks		
			Updates: WA CDR + 90 days and as required		

¹ Hard Copy: indicates number of hardcopies to be delivered. Unless indicated, hardcopies are in addition to electronic submission.

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
SE 6	Interface Control Document (ICD)	Work Assignment	Initial: WA PDR – 3 weeks		A
			Final: WA CDR - 3 weeks		
			Updates: WA CDR + 90 days and as required		
SE 8	Verification & Validation Plan	ESPDS Enterprise	Initial: Initial PDR– 3 weeks		A
			Final: Initial CDR– 3 weeks		
			Updates: As required		
SE 9	Performance Verification Reports	Work Assignment	Final: 30 days after verification activity completion		A
			Updates: As required		
SE 10	Performance Verification Matrix	Work Assignment	Initial: WA PDR – 3 weeks		R
			Final: WA Readiness Review – 3 weeks		
			Updates: As required		
SE 11	Modeling and Simulation Plan	ESPDS Enterprise	Initial: SDR (Initial and WA) – 3 weeks		R
			Final: CDR (Initial and WA) – 3 weeks		
			Updates: CDR + 90 days and as required		
SE 12	Modeling and Simulation Analysis Report	Work Assignment	As Required		R
SE 13	13 Design Description	Work Assignment	Initial: PDR (Initial and WA) – 3 weeks		R
			Final: CDR (Initial and WA) – 3 weeks		
			Updates: CDR + 90 days and as required		
SE 14	Database Design Description	Work Assignment	Initial: PDR (Initial and WA) – 3 weeks		R
			Final: CDR (Initial and WA) – 3 weeks		
			Updates: CDR + 90 days and as required		
SE 15	Engineering Drawings and Change Notices	Work Assignment	Initial: CDR (Initial and WA) – 1 week		I
			Final: 1 week prior to WA PSR(s)		
			Updates: As required		
SE 16	Study and Analysis Reports	Work Assignment	Initial: As specified in Work Assignment		A
			Final: As required in Work Assignment		
			Updates: As required		

Table 7— Review Packages

ID	Title	Applicability Level	Task order Submission	Hard	Acceptance
				Copies ¹	Code
RE 1	Test Readiness Review Package	Work Assignment	Final: 30 days prior to testing Updates: 2 weeks prior to each test	10 color	R
RE 2	Pre-Ship Review (PSR) Packages	Work Assignment	Final: 30 days prior to WA PSR	10 color	R

¹ Hard Copy: indicates number of hardcopies to be delivered. Unless indicated, hardcopies are in addition to electronic submission.

CONTRACT DATA REQUIREMENTS LIST

RE 3	Readiness Review Packages	Work Assignment	Initial: WA RR – 2 weeks	10 color	R
			Final: WA RR + 30 days		
RE 4	System Requirements Review (SRR)/	Work Assignment	Initial: WA SRR/SDR – 2 weeks	10 color	R
	System Definition Review (SDR) Packages		Final: WA SRR/SDR + 30 days		
RE 5	Preliminary Design Review (PDR)	Work Assignment	Initial: WA PDR – 2 weeks	10 color	R
	Packages		Final: WA PDR + 30 days		
RE 6	Critical Design Review (CDR) Packages	Work Assignment	Initial: WA CDR – 2 weeks	10 color	R
			Final: WA CDR + 30 days		
RE 7	Operational Readiness Review (ORR)	Work Assignment	Initial: WA ORR – 2 weeks	10 color	R
	Packages		Final: WA ORR + 30 days		
RE 8	Systems Acceptance Review (SAR)	Work Assignment	Initial: WA SAR – 2 weeks	10 color	R
	Packages		Final: WA SAR + 30 days		

Table 8— Hardware

ID	Title	Applicability Level	Task order Submission	Hard	Acceptance
				Copies ¹	Code
HW 1	Hardware COTS Modification Report	Work Assignment	As required		A
HW 2	Hardware Installation Plan	Work Assignment	Final: WA PSR – 30 days		A
			Updates: As required		

Table 9— Software

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
SW 1	Software Management and Development Plan	ESPDS Enterprise	Initial: Task order Award + 90 days Final: Task order Award + 150 days Updates: As required, annual, and prior to the end of the POP		A
SW 2	Software COTS Modification Report	ESPDS Enterprise	As required		A
SW 3	Software Release Delivery Package	Work Assignment	Final: With each WA Updates: As required		R
SW 4	Software Version Description	Work Assignment	Initial: TRR – 2 Weeks Final: For each WA Updates: 2 weeks prior to each test and as required		R

¹ Hard Copy: indicates number of hardcopies to be delivered. Unless indicated, hardcopies are in addition to electronic submission.

CONTRACT DATA REQUIREMENTS LIST

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
SW 5	Software Design Document	Work Assignment	Initial: TRR – 2 weeks Final: WA Completion – 3 weeks Updates: As required		R
SW 6	Software Test Plan	Work Assignment	Initial: PDR – 2 weeks Final: CDR – 2 weeks Updates: As required		R
SW 7	Software User Manual(s)	Work Assignment	Initial: TRR – 2 weeks Final: WA Completion – 3 weeks Updates: As required		R

Table 10— Integration and Test

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
IT 1	Integration and Test Plan	ESPDS Enterprise	Initial: Initial PDR – 2 weeks Final: Initial CDR – 2 weeks Updates: CDR (Initial and WA) + 90 days and As required per WA	Сорис	A
IT 2	Detailed Test Plan(s) and Procedures	Work Assignment	Initial: 60 days prior to test Final: TRR/Test – 2 weeks Updates: As required		R
IT 3	Post-Test Data Analysis Report	Work Assignment	Initial: Test + 2 weeks Updates: As required		R
IT 4	Post-Test Data Packages	Work Assignment	Initial: Test + 2 weeks Updates: As required		R

Table 11- Transition to Operations

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
TO 1	Operations and Maintenance Manual	Work Assignment	Initial: Initial site TRR – 2 weeks Final: WA Completion – 3 weeks Updates: As required for each WA	6	R
TO 2	Computer Operations Manuals	Work Assignment	Initial: TRR – 2 weeks FinalWA Completion – 3 weeks Updates: As required for each WA	6	R

¹ Hard Copy: indicates number of hardcopies to be delivered. Unless indicated, hardcopies are in addition to electronic submission.

CONTRACT DATA REQUIREMENTS LIST

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
TO 3	Computer Programming Manuals	Work Assignment	Initial: TRR – 2 weeks	6	R
			Final: WA Completion – 3 weeks		
			Updates: As required for each WA		
TO 4	User Training, Education, and Outreach	Work Assignment	Initial: WA Final TRR – 30 days		R
	Material(s)		Final: WA Training Execution – 30 days		
			Updates: As required for each WA		
TO 5	Training Plan	ESPDS Enterprise	Initial: Initial PDR – 2 weeks		R
			Final: Initial CDR – 2 weeks		
			Updates: CDR (Initial and WA) + 30 days and as required for		
			each WA		
TO 6	Training Documentation	Work Assignment	Initial: WA Final TRR – 30 days		R
			Final: WA Training Execution – 30 days		
			Updates: As required for each WA		
TO 7	Maintenance Plan	ESPDS Enterprise	Initial: Initial PSR – 30 days		R
			Final: Initial TRR – 2 weeks		
			Updates: As required for each WA		
TO 8	Maintenance Records	ESPDS Enterprise	Initial: One month after start of WA I&T		I
			Final: At Operational Acceptance		
			Updates: As required for each WA		
TO 9	Facilities Plan	ESPDS Enterprise	Initial: Initial PSR – 30 days		R
			Final: Initial TRR – 2 weeks		
			Updates: As required for each WA		

Table 12- Quality Assurance

ID	Title	Applicability Level	Task order Submission	Hard Copies ¹	Acceptance Code
QA 1	Quality Assurance Implementation Plan (QAIP)	ESPDS Enterprise	Initial: Initial SDR - 30 days Final: Initial CDR - 30 days Updates: As required for each WA		A
QA 2	Reliability, Maintainability, and Availability (RMA) Predictions Report	Work Assignment	Initial: PDR (Initial and WA) – 30 days Final: CDR (Initial and WA) – 2 weeks Updates: As required		R

¹ Hard Copy: indicates number of hardcopies to be delivered. Unless indicated, hardcopies are in addition to electronic submission.

PM 1 Project Management Plan Table 2

DESCRIPTION/PURPOSE

Describes how the Project is organized and managed. It provides the management structure, responsible lines of communications, and processes for managing a project.

DATA REQUIREMENTS

The Project Management Plan (PMP) shall address interfaces with the Government.

The PMP **shall** integrate the overall organization, management approach, and structure of the Project with the Government PMP.

The PMP **shall** describe how and where the project will operate during all phases of the task order.

The PMP **shall** include graphics, diagrams, and charts (e.g., flow diagrams, logic networks) to reduce the amount of narrative material.

The PMP **shall** delineate how the requirements of the SOW will be achieved and include a description of planned activities for identifying SOW requirements.

The PMP **shall** describe the scope of the tasks, and approach for integrating WAs into the ESPDS Enterprise solution.

The PMP **shall** include a description of all task and functional narratives required to address the requirements of the SOW and the events and activities described in the Integrated Master Plan (IMP).

The PMP **shall** describe the processes and levels of the Project organization Capability Maturity Model® Integrated (CMMI) qualifications.

Scope Management

The PMP **shall** describe how the project scope and requirements collection/verification will be managed and controlled.

The PMP shall provide a Work Breakdown Structure (WBS) with details of the major activities.

Human Resource Management

The PMP **shall** provide an organizational chart(s) and sufficient supplemental narrative to describe fully the organization proposed for carrying out the Project, showing inter- relationships of technical management, business management, and subcontract management, from lower level through intermediate management to top-level management with detailed explanation of the authority of the contractor project manager relative to other ongoing projects and applicable support organizations within the company structure.

The PMP **shall** discuss the project manager's control and authority over essential resources, interdepartmental work, and functions necessary to accomplish the work.

The PMP **shall** provide a detailed explanation of how and by whom interdepartmental work will be monitored.

The PMP **shall** provide a detailed explanation of the process to be followed by the project manager in obtaining decisions beyond his/her authority and in resolving priority conflicts for resources and functions not under the project manager's direct control such as personnel, finances, and facilities.

The PMP **shall** discuss the staffing and resources of administrative, technical, test, manufacturing and system safety, quality assurance, reliability, configuration management personnel for this project and the approach for addressing any shortfalls.

Procurement Management

The PMP **shall** include procurement management.

The PMP **shall** describe how any subcontracts will be managed and reviewed plus the interrelationships with the parent company and the subcontractors.

Project Controls

The PMP **shall** provide contractual procedures proposed for the Project to effect administrative and engineering changes, describing any differences from existing procedures.

The PMP **shall** describe management techniques to be employed in minimizing project costs and schedule impacts, including controls to be exercised over subcontractors and suppliers.

The PMP **shall** describe the planned use of the Action Items in Contractor/Government interactions, including the assignment of actions, designation of importance, updating status, and tracking to closure.

The PMP **shall** explain how internal audits/reviews ensure that scheduling data reported to the Government accurately reflects the work status.

Cost Management

The PMP shall describe cost controls.

Schedule Management

The PMP shall explain/describe the schedule administration/control.

The PMP shall describe how the schedules are developed, maintained and updated.

The PMP **shall** explain the internal review cycle of the scheduling process.

Integrated Change Control

The PMP **shall** include the Integrated Change Control plan.

The Integrated Change Control plan **shall** be prepared in accordance with the Contractor's practices and consistent with the ESPDS Document Management Plan and Change Control Plan.

Risk Management

The PMP shall include a Risk Management section.

Risk Management shall be based on ISO-17666 dated 01 Apr 2003 (untailored).

Risk Management shall describe how the contractor will participate in the ESPDS risk process.

Risk Management **shall** include risk tracking and the escalation of realized risks into issues within the risk database.

Risk Management meetings and decisions shall report the results of RMA assessments and

predictions.

Risk Management **shall** describe related potential risks, discuss the approach to problem avoidance and/or solution, and address the degree to which proposed procedures are proven through similar experience

The Risk Management section shall contain the project risk register.

Training

The PMP **shall** include how training will be managed as part of all development activities that are delivered to the Government.

Communications Management

The PMP **shall** include communications management.

Communications management **shall** describe the communication of project status, budget, schedule, and quality performance.

Communications management shall describe communication vehicles and techniques.

The communications frequency and specifics **shall** be consistent with the project scope, significance, and risk.

Communications management shall describe the reporting mechanisms, metrics, and formats.

Quality Assurance Management

The PMP shall include quality management.

The PMP **shall** describe and illustrate the proposed ESPDS Quality Assurance organizational structure, including staffing plans, reporting channels, authority and responsibilities, and management visibility.

Quality assurance **shall** specify the techniques used to measure and control the work process and product quality.

Quality control mechanisms **shall** include quality assurance of work processes, verification and validation, joint reviews, audits, and process assessment.

Process Improvement

The PMP **shall** describe the process for performing process improvement activities.

PM 2 Integrated Master Plan (IMP) Table 2

DESCRIPTION/PURPOSE

The IMP identifies the necessary Events, Significant Accomplishments, and associated Accomplishment Criteria to meet the intent of the SOW and deliver the capabilities identified in the WA Requirements Specification. As an event-driven document, the IMP tracks project maturity, represents up-front planning and commitment, provides the basis for lower tier planning, instills balanced design discipline, and provides a measure of progress in accomplishing ESPDS objectives.

DATA REQUIREMENTS

The IMP **shall** capture the activities necessary to accomplish project requirements.

The IMP **shall** be structured to allow measurement of progress towards ESPDS project life cycle requirements and to provide management with in-process verification of requirements in order to make informed event decisions.

The IMP **shall** contain selected Narratives (or references to other documents) to correlate the required processes to the achievement of the Significant Accomplishments and Accomplishment Criteria. The schedule for completing IMP activities is the Integrated Master Schedule (IMS).

The IMP **shall** be a single plan for the entire contractor effort, including major subcontractor activities.

Events in the IMP **shall** include key decision points in the project.

As decision points for continued activity, events in the IMP **shall** clearly define expected maturity at a specific point in the project.

Events in the IMP shall mark the initiation or conclusion of major project activity.

Events in the IMP **shall** be logically sequenced and may include demonstration milestones, major reviews, model and simulation results, or product deliveries, and other key decision points.

The beginning of the IMP **shall** include assumptions/guidelines and definitions of each Event and selected action verbs.

Significant Accomplishments shall be completed prior to entering or exiting an Event.

Significant Accomplishments **shall** provide Government insight into the process for achieving requirements of SOW.

Significant Accomplishments in the IMP **shall** be sequenced in a manner that ensures a logical path is maintained throughout the effort and tracks against Events.

Each Significant Accomplishment in the IMP **shall** be defined by one or more Accomplishment Criteria.

Significant Accomplishments **shall** include desired result at a specified Event which defines maturity and/or discrete step in a significant process.

Accomplishment Criteria **shall** be definitive indicators of maturity required to declare completion of a Significant Accomplishment.

Accomplishment Criteria in the IMP **shall** be tied to the completion of detailed tasks/activities, be measurable, avoid the use of "percent completed", and avoid citing completion of data reports rather than results of data reports.

Accomplishment Criteria in the IMP **shall** include the use of Technical Performance Measures and metrics to track detailed tasks in the IMS.

Accomplishment Criteria **shall** include completion of specific detailed tasks; confirmation of the value of significant technical parameters; completion of documents which provide results of inprocess verification (successfully completed analysis or other testing activities); and completion of critical activities required by the Contractor's project plans/operating instructions.

Each Accomplishment Criteria **shall** directly relate to a particular Organizational Breakdown Structure (OBS) element used for execution of the project work efforts. This one-to-one relationship may also occur at the Significant Accomplishment level.

If the contractor's development, integration, and/or testing approach uses builds, increments, spirals, or other method, and/or delivers the capabilities identified by the SOW and WA Specification in an incremental or spiral manner, the IMP **shall** include a matrix and supporting narrative describing the relationship between the content of the contractor's planned builds, increments, or spirals and the capability WA requirements.

The IMP shall include the events identified in Table 13.

The IMP **shall** include the events below the level of Table 13 (e.g., requirements and design reviews at the subsystem, segment, and end item level and/or sub-tier "build levels").

The IMP **shall** describe the documentation and opportunity that will be available for Government review and comment.

Table 13 - Integrated Master Plan

Table 13 – Integrated Master Plan Date Date Event							
Event	Establishment ¹	Control ²	Approval ³				
Task order Award	TBS	G	G				
Post Award Conference	Gov Date	G	G				
Integrated Baseline Review	KTR Date (S)	G	G				
Initial Delivery System Requirements Review (SRR)	Gov Date	G	G				
Initial WA System Design Review (SDR)	Gov Date	G	G				
Initial WA Preliminary Design Review (PDR)	Gov Date	G	G				
Initial WA Critical Design Review (CDR)	Gov Date	G	G				
Factory Test Readiness Review(s) (TRR)	KTR Date	K	G				
Qualification Testing	KTR Date	K	G				
Verification Testing	KTR Date	K	G				
PSR	KTR Date	G	G				
Security Test(s)	TBS	G	G				
Acceptance Review	KTR Date	G	G				
Delivery	KTR Date	G	G/K				
Follow-on WA Reviews							
Delta IBR	KTR Date	K	G				
SRR	KTR Date	K	G				
SDR	KTR Date	K	G				
PDR	KTR Date	K	G				
CDR	KTR Date	K	G				
Factory Test Readiness Review(s) (TRR)	KTR Date	K	G				
Qualification Testing	KTR Date	K	G				
Verification Testing	KTR Date	K	G				
PSR	KTR Date	G	G				
Security Test(s)	TBS	G	G				
Acceptance Review	KTR Date	G	G				
Delivery	Gov Date	G	G/K				
Additional Transition Events including training activities	KTR Dates	G	G/K				

¹ Dates not specified by Government or TBS **shall** be established by the contractor.

² All dates not specified as Government controlled are under contractor control.

³ Event approvals indicate which events are subject to Government approval. All other events approvals are left to the contractor. For events not requiring Government approval supporting documentation and Government review may be required.

PM 3 Handover Approach Plan Table 2

DESCRIPTION/PURPOSE

Provides plan for how the contractor will continue ongoing development and O&M activities.

DATA REQUIREMENTS

The Handover Approach Plan **shall** identify the planned approach for continuing ongoing development and O&M activities at task order award.

The Handover Approach Plan **shall** include an evaluation of the current design toward meeting the requirements.

The Handover Approach Plan shall include an assessment of the viability of the current schedule.

The Handover Approach Plan **shall** provide a risk assessment on the current design, schedule, and lifecycle cost.

The Handover Approach Plan **shall** identify any hardware or associated documentation needed to support development and O&M. This hardware may include computers, peripheral equipment, hardware simulators, stimulators, emulators, diagnostic equipment, and non-computer equipment.

The Handover Approach Plan **shall** provide a method for transferring the development configuration management data from the development Configuration Management system to O&M for support and reference.

PM 4 Handover Recommendation Plan Table 2

DESCRIPTION/PURPOSE

The Handover Recommendation Plan provides background and recommendations to the follow-on contractor on continuing, ongoing development and O&M activities.

DATA REQUIREMENTS

The Handover Recommendation Plan **shall** describe the general characteristics of the systems/software to be transitioned to the new contractor; summarize the history of system development, operation, and maintenance; and identify applicable and reference documents, highlighting key documents impacting design, schedule, and cost.

The Handover Recommendation Plan **shall** identify and describe the hardware and associated documentation needed to support development and O&M. This hardware may include computers, peripheral equipment, hardware simulators, stimulators, emulators, diagnostic equipment, and non-computer equipment.

The Handover Recommendation Plan **shall** include a status of activities per the work breakdown structure showing the schedule and recommended resource planning to complete the activities.

The Handover Recommendation Plan **shall** provide a risk assessment on the technical design, schedule, and lifecycle cost and identify recommended mitigation strategies.

PM 5 Meeting Minutes

Table 1Table 2

DESCRIPTION/PURPOSE

Meeting Minutes document the content and results of meetings.

DATA REQUIREMENTS

Meeting Minutes **shall** identify meeting objectives, presentations, topics addressed (including summary of key points, conclusions, and recommendations), attendee list, Government directions, action items identified and added to the Government's ESPDS Action Item Database, issues, risks, and plan for any follow-on meeting(s).

Meeting Minutes **shall** be prepared and delivered for all meetings and for other activities as directed by the Government.

Meeting Minutes **shall** be updated and re-posted as necessary to incorporate corrections and clarifications.

Meeting Minutes shall use a standard template to ensure consistency across the project.

Meeting Minutes shall use the risk register for recording and tracking meeting risks.

PM 6 Task Order and Work Assignment Closure Plans Table $2\,$

DESCRIPTION/PURPOSE

Describes how the Government and Contractor will close this Task Order and WA.

DATA REQUIREMENTS

The Task Order and Work Assignment Closure Plan **shall** list all Government-owned equipment being used by the Contractor, including: item descriptions, serial numbers, locations, and, if leased, the task order status.

The Task Order and Work Assignment Closure Plan **shall** list all third-party contracts currently being managed by the Contractor, including: names of the products, third-party contractor contact information, version identifiers of the most recently amended versions of the contracts, location (e.g., path) to access electronic versions of the most recently amended versions of the contracts, hard copy of the most recently amended versions of the contracts.

The Task Order and Work Assignment Closure Plan **shall** identify the location of any facilities (i.e., office space, computer rooms) to be vacated.

The Task Order and Work Assignment Closure Plan **shall** estimate the final accounting, including itemization of the amounts to be spent prior to the Task Order or Work Assignment End-Date and itemization of outstanding Government financial obligations to the Contractor.

The Task Order and Work Assignment Closure Plan **shall** document compliance with project requirements.

PM 7 Integrated Master Schedule Table 2

DESCRIPTION/PURPOSE

The Integrated Master Schedule (IMS) is an integrated, networked schedule containing all of the discrete work packages, planning packages, and tasks/activities required to successfully complete the work effort captured in the IMP. It is vertically traceable to the IMP, WBS, and SOW. The IMS is used to verify attainability of task order objectives, to objectively evaluate progress toward meeting project objectives, and to integrate the project schedule activities with all related components.

DATA REQUIREMENTS

The IMS shall be submitted in accordance with DI-MGMT-81650.

The IMS **shall** include the full scope of the contractor effort, including the efforts of all activities, including subcontractors and suppliers.

The IMS **shall** incorporate relevant schedule contents available from vendors, external interface developers, and the Government.

The schedule **shall** be an integrated, logical network-based schedule that correlates to the WBS, OBS, IMP, and SOW. The IMS is vertically and horizontally traceable to the cost/schedule reporting instrument used to address variances such as the CPR. Vertical traceability between the Master, Intermediate, and Detailed networks and schedules should be established and maintained including a proper revisions process during the performance of this task order.

The IMS **shall** be sufficiently detailed that critical and high risk efforts are identified and planned realistically to assure the ability to execute, reflecting those risks identified and documented in the contractor's risk management plan.

The IMS **shall** include the Master Logic Network and Master Schedule: a time-phased schedule portraying all significant events, activities, and milestones of the program. It reflects the overall time allocated to meet specific requirements and establishes the ground rules for implementing the total program. It summarizes the schedule data and status information contained in the intermediate level logic network schedules and includes baseline as well as actual/forecast start and finish dates for all subassemblies, significant activities, events and milestones.

The IMS **shall** provide a master schedule bar chart, clearly depicting the critical path(s) and suitable for view graph presentation to management.

The IMS **shall** include Intermediate Logic Network and Schedules which are an expansion of the master schedule and reflect all appropriate WBS elements.

Intermediate Level Logic Network Schedules shall provide:

- a) Sufficient detail to permit identification of the elements necessary for overall accomplishment
- b) Time phase the work elements of the WBS
- c) Identify major interfaces between project organizations, functional departments, and associated contractors

- d) Establish controlled intermediate milestones to adequately monitor progress
- e) For each task/activity, the baseline start and completion dates; the current expected/planned start and completion dates, the number of work days required to accomplish the task, and the amount of float/slack in work days for each task, a unique activity identification number for each task, and a task description
- f) The critical path derived from the intermediate level logic network schedules

The IMS **shall** include Detail schedules: These logic network and/or bar chart schedules are an expansion of the intermediate level logic network schedules and reflect all cost account plan activity (discrete effort only) schedules.

The IMS **shall** include all implementation schedules: Stand alone bar chart schedules clearly identifying all tasks associated with implementing a specific change (design through incorporation of the directed change into hardware, software, firmware, and associated documentation). Provide the change schedule once, and then the changes incorporated into the detail, intermediate and master schedules.

The IMS **shall** provide tasks/activities with objective measures of technical progress to allow for the use of objective earned value techniques to calculate work performance.

If Level-of-effort (LOE) activities are included, LOE **shall** be clearly identified as such and be included in such a way that LOE does not yield an erroneous critical path. LOE-type activities may be included or excluded as appropriate. Generally, LOE should be minimized.

The IMS **shall** be included in status reports and submitted to the procuring activity prior to or concurrently with CPR data. The IMS may reflect data either as of the end of the calendar month or as of the contractor's accounting period cutoff date, provided it is consistent and traceable to the CPR (if applicable), per agreement with government.

Subcontractor schedule data that reflect different status dates than the prime contractor's schedule status dates **shall** be described in the analysis section of the IMS.

The monthly schedule analysis narrative **shall** be delivered prior to or concurrently with the monthly CPR reports. A monthly narrative report describes the overall schedule status of the project based on schedule float/slack analysis for each major subsystem/subassembly/assembly, a comparison of current month completion date/float for that element with that of the prior month, impacts due to significant project changes, and an explanation of the primary critical path along with impact to major project milestones, possible work-around and/or schedule risk mitigation plans being considered to maintain the schedule.

The monthly schedule analysis narrative **shall** be delivered in electronic media.

Any updates to the IMS and all associated reports **shall** be provided monthly prior to or concurrently with the monthly CPR reports by electronic media.

The IMS **shall** include a log book identifying all schedule changes (task additions, deletions, duration adjustments, changes to logic) to the schedule baseline documentation, provided to the ESPDS Project Office upon request.

The IMS format shall be Microsoft Project 2003.

PM 8 Status Reports

Table 2

DESCRIPTION/PURPOSE

Provides Task order status reporting and enables Government oversight.

DATA REQUIREMENTS

The Status Reports **shall** indicate the status of the task order as of close of business the preceding Friday, including a summary of progress made.

The Status Reports **shall** address the work completed during the reporting period against the work planned, and address recovery plans if necessary.

The Status Reports **shall** include technical progress, including significant accomplishments and milestones reached.

The Status Reports **shall** include problems encountered and proposed corrective action.

The Status Reports shall indicate any actual or anticipated slip in schedule.

The Status Reports shall include identification of any baseline or project changes.

The Status Reports **shall** detail the work planned for the next reporting period and summarize the work planned for the next month.

The Status Reports **shall** contain teleconference summary for any teleconferences occurring during the reporting period.

The Status Reports shall contain Near-term Risk Data in the form of a risk register.

The Status Reports shall contain Open Issues Data.

Note: Status reports are intended to be timely and informal and should detail the above topics as changes or problems occur.

PM 9 Project Management Status Review (PMSR) Data Package Table $2\,$

DESCRIPTION/PURPOSE

The PMSR data package provides the Government with a means for assessing and monitoring the task order to ensure that the contractor effort is being properly controlled. Presents accomplishments compared to planned activities and recommendations on issues or concerns.

DATA REQUIREMENTS

The Project Management Status Review data package **shall** include all aspects of the effort covered by the task order.

The Project Management Status Review data package **shall** be distributed to the attendees at the review.

The Project Management Status Review data package **shall** consist of the agenda, presentation material, detailed back-up material as needed, and documentation of action items and responses to action items, including supporting data as needed.

The Project Management Status Review data package shall include at least the following subjects:

- a) Accomplishments since last review and open action items
- b) Schedule
- c) Technical issues and concerns
- d) Segment status and activity including key subsystem and segment activity and status
- e) Current problems and anticipated resolution
- f) Open Task Order and WA items
- g) Planned effort for next review period
- h) Quality assurance status
- i) Outstanding Proposals
- j) Milestone events depicting critical items of project status for the succeeding month with a report on the previous months milestone events
- k) Subcontract Technical Performance
- 1) Business issues, including personnel changes
- m) Technical Performance Measurements (TPMs) Status
- n) Software Metric report that contains at a minimum progress tracking measures and trends on (at least) a CSCI basis for the following types of measures: software size, software functionality, number of software requirements and their change status, design/code complexity index at CSU, CSC, and CSCI levels, source code production rate estimates versus actual results, number of Software Change Requests/Anomaly Reports and their status, resource margins for utilization of memory, CPU, input/output bandwidth for principal function points, and effort data (staffing profile) estimates versus actual results
- o) IT Security updates as required by Commerce Acquisition Regulation (CAR) 1352.239-73

The Project Management Status Review data package **shall** include Earned Value Reporting (at a minimum, at the Cost Account Level), with cumulative-to-date Earned Value Data, current period Earned Value Data, variance analyses and Corrective Action (as applicable), trend data, both for Cumulative-to-date and Current period, for the past 12 reporting periods, Independent Estimate At Complete data and analysis, and Variance At Complete data and analysis.

The Project Management Status Review data package **shall** include a risk register that:

- a) Is prepared in accordance with the contractor's Risk Management Plan
- b) Is a configuration-controlled document
- c) Includes a description of the risk, including primary causes and contributors, actions (including dates) embedded in the program or project to date to reduce or mitigate it, mitigation criteria, and information collected for tracking purposes
- d) Includes a risk projection or waterfall chart showing the anticipated future changes in risk level based upon achievement of program milestones or events, risk mitigation actions, and the impact of potential mitigation actions not yet approved
- e) Includes any primary consequences if the undesired event occurs
- f) Includes an estimate of the probability of occurrence (qualitative or quantitative), together with the uncertainty of the estimate and of the effectiveness of any implemented risk mitigation measures
- g) Includes additional risk tracking information including risk originator (person who initially identified the risk), risk classification (e.g., technical, cost, or schedule), risk owner (person responsible for tracking/mitigating risk), and risk timeframe (time period when mitigation action needs to be initiated)
- h) Includes potential additional risk mitigation measures, which include a comparison of the cost of risk mitigation versus the cost of occurrence multiplied by the probability of occurrence
- i) Includes characterization of a risk as "acceptable" or closed that is supported by a rationale (with the concurrence of the Government) that all reasonable mitigation options (within cost, schedule, and technical constraints) have been instituted and/or that risk has been reduced

PM 10 Integrated Baseline Review (IBR) Data Package Table $2\,$

DESCRIPTION/PURPOSE

An IBR is a joint assessment conducted by the Government and the contractor to verify the realism and accuracy of the Performance Measurement Baseline (PMB). The IBR Data Package is the contractor-provided data that is reviewed at the IBR. The IBR involves verifying the technical content of the baseline and assessing the realism and accuracy of the related resources (performance budget and IMS). The IBR focuses on assessing the realism of the baseline.

DATA REQUIREMENTS

The IBR Data Package **shall** be submitted in accordance with the Department of Defense Earned Value Management Implementation Guide (EVMIG) (October 2006), Section 2.4.

Each IBR Data Package **shall** include a review of the WBS and its suitability for ESPDS cost accounting and reporting.

Each IBR Data Package **shall** include an EVMS Plan [PM 11], time-phased expenditure plan, resource loading, cost accounts, and plan for WA integration into the ESPDS Integrated Master Plan and ESPDS Integrated Master Schedule.

The IBR Data Package **shall** include a review of the contractor's earned value assessment and reporting systems to assess system compliance with applicable standards and, in particular, the means by which actual expenditures of time and effort in the performance of tasks identified in the WBS are used to generate earned value measurements and reports.

The following document is given for the IBR Data Package: Department of Defense Earned Value Management Implementation Guide (EVMIG) (October 2006), Section 2.4.1, p. 55.An IBR Data Package **shall** be submitted in accordance with the IBR purpose in Part 4 above.

The IBR Data Package **shall** contain the Program Management Data Notebook, including technical scope and cost, and the Control Account Manager Notebooks that incorporate the data products requested by the Project Office (hard copy and electronic copy).

The IBR Data Package shall contain a baseline electronic version of the IMS.

The IBR Data Package **shall** contain the contractor's Earned Value Process documentation and methodology (hardcopy and electronic).

The IBR Data Package shall contain all Earned Value performance data available to date.

The IBR Data Package **shall** contain the Risk Register with the current status of each risk.

The IBR Data Package **shall** be delivered electronically prior to the IBR.

Paper copies of the IBR Data Package **shall** be delivered to the location of the review for use during the review.

Typical Contents of Integrated Baseline Review Notebooks include the following. (Note: Most of these documents are ongoing operational documents gathered together into one notebook. Some documents will already reside in the EVMS Plan.)

Program Management Data Notebook

- 1. Earned Value Management EVM Top Level Authority
- 2. Brief overview of EVM process.
- 3. Organization Charts flow down as needed including EVM from subcontracts
- 4. Internal communication and action planning structure
- 5. Top Level Planning and Baseline assumptions
- 6. Project Percentages (Level of Effort versus Discrete)
- 7. Project WBS
- 8. Project Element of Cost (EOC) Resource Allocation Matrix (RAM)
- 9. Top Level Project Work Authorization and Cost Account Plan
- 10. Project technical scope flow down from SOW to Managers and Control Account Management (CAM)
- 11. Estimate at Completion (EAC) assumptions if different from negotiated Budget at Completion (BAC) values
- 12. Contract Performance Report (CPR) Submittals
- 13. Project Schedule, both top-level with vertical and horizontal traceability and Critical path
- 14. Risk Management approach, with current Top Risks and Integrated Product Team (IPT) Risk list and Self Assessment Procedures
- 15. Management Reserve levels and approach
- 16. Undistributed budgets, if any, and the WAs
- 17. Funding Profile
- 18. Subcontractor Management Plan, if applicable, including management review or reporting cycle, Technical/Schedule/Cost/Risk Plan and Status, EVM flow-down, IBR results, and any other key programmatic details
- 19. CAM Data Notebook
- 20. Includes data content specific to the Control Account or Integrated Product Team.
- 21. Technical Scope/Cost
- 22. Organization chart for the Cost Account (CA)
- 23. RAM (show location in RAM with budget amounts)
- 24. Location in Task order Statement of Work
- 25. Work Authorization Documentation, with trace to authorized budget, to show how work gets authorized from high to low levels
- 26. Time Phased Control Account Plan, including WAs and Planning Packages and the resource loading of tasks
- 27. Baseline Metrics, including phased dollars by element of cost breakdown and phased workforce profiles (Full Time Employees)
- 28. Labor Reports
- 29. Schedules

Includes flow-down of intermediate schedule into detailed schedules, including any critical path, key handoffs, and schedule metrics.

1. Risk List

Includes current or anticipated risks in this CA or IPT

- 1. Earned Value Methodology
 - o EV techniques and rationale
 - o Cost performance report available to date

- Variance analysis reporting if applicableInternal communication and action planning

PM 11 Earned Value Management System (EVMS) Plan Table 2

DESCRIPTION/PURPOSE

It describes the contractor's implementation of its earned value management system for the purpose of assessing the adequacy and integrity of the system.

DATA REQUIREMENTS

The EVMS Plan **shall** be submitted in accordance with the American National Standards Institute/ Electronic Industries Association (ANSI/EIA) 748-B.

The EVMS Plan **shall** be available in hardcopy or electronic physical media format upon request.

The EVMS Plan **shall** demonstrate the use and understanding of the contract's overall financial and project management system with regard to EVMS at all levels of management.

The EVMS Plan **shall** identify the policies, methods, procedures, and training used.

The EVMS Plan and supporting documentation **shall** describe the implementation of the contractor's earned value management system.

The EVMS Plan **shall** address processes for managing technical scope, schedule, cost and risk; for conducting variance analysis; and for developing ongoing and comprehensive estimates at completion.

The EVMS Plan shall address the flow down of EVMS requirements to all major subcontracts.

The EVMS Plan **shall** ensure that the system provides for the results of all analyses based on EVM to be linked to or associated with the contractor's Risk Management System (as applicable).

The EVMS Plan **shall** be revised at the Government's request, if a change in the EVM system architecture occurs or in the event of a major task order modification.

The EVMS Plan **shall** be submitted for review and include a projected timeline with milestones to reach final certification where the contractor does not have a certified EVMS.

PM 12 Contract Performance Report (CPR) Table 2

DESCRIPTION/PURPOSE

Provides the monthly status of performance data and estimates at complete, identifies approved changes to the Performance Measurement Baseline, and reports variances and projected variances at complete including explanatory analysis.

DATA REQUIREMENTS

The Contractor Performance Report (CPR) shall be submitted in accordance with:

- 1) DI-MGMT-81466A, Contract Performance Report dated 3/30/2005 https://acc.dau.mil/CommunityBrowser.aspx?id=19544
- 2) Department of Defense Earned Value Management Implementation Guide (EVMIG)

The CPR **shall** include data pertaining to all authorized task order work, including both priced and un-priced effort that has been authorized at a not-to-exceed amount in accordance with the Contracting Officer's direction.

The CPR **shall** separate direct and indirect costs and identify elements of cost for all direct reporting.

The CPR **shall** include Formats 1 - 5, down to a WBS Level 3. A lower level of reporting may be required for elements that are classified as technical, schedule, or cost risk areas. For Formats 2 and 4, the organizational category will be to at least one level below the project manager. For Formats 3 and 4, include identical forecast periods. These periods **shall** be monthly for at least six months, quarterly for at least two quarters, and then quarterly, semi-annually, or annually to completion.

Earned value performance measurement data for Government and/or contractor-identified mediumand high-risk WBS items **shall** be reported on Format 1 of the monthly CPR until such time as both Government project management and the Contractor agree that they no longer represent medium or high risks.

The monthly CPR **shall** report earned value performance measurement data changes from the previous month.

The CPR **shall** be at a level where the risk resides in the WBS. For medium-and high-risk elements lower than Level 4, specific narrative variance analyses are not required unless specified as special interest.

To ensure an integrated approach to risk management, the data provided by this CPR **shall** be in accordance with the WBS, IMS, and Risk Management Processes, Plans and Reports (where required), Probabilistic Risk Assessment Processes and Reports (where required), and the Monthly/Quarterly Contractor Financial Management Reports.

The CPR **shall** include reconciliation between the Cost Funds Status Report (CFSR) and the Contractor Performance Report. This reconciliation may be included within the required CPR Formats.

CPR formats **shall** be completed according to the instructions outlined in DI-MGMT-81466A for report Formats 1-5. Report variance analysis thresholds will initially be 10% (+ or -) of either current or cumulative cost or schedule variance to date. Other significant variances **shall** be explained in CPR reports that are causing or likely to cause significant cost or schedule overruns (contractor determined). The variance analysis thresholds and/or reporting levels may later be revised by Government after personnel evaluate the contractor's schedule, cost performance, and risk. Special emphasis should be placed in the variance analysis on cost and schedule growth linked to technical risks (e.g., technology development efforts; design engineering; integration; complexity; project management; systems engineering; duration constraints) identified by both the Government and contractor.

Contractor format may be substituted for CPR formats whenever they contain all the required data elements at the specified reporting levels in a form suitable for Project management use.

The CPR **shall** be submitted electronically in a delivery method deemed acceptable to the Government.

The CPR submissions **shall** include CPR data files capable of being downloaded into wInsight. These files **shall** be submitted concurrently with Formats 1-5.

PM 13 Personal Property Management Plan Table 2

DESCRIPTION/PURPOSE

The Personal Property Management Plan provides for the control of Government personal property, documenting a continuous audit trail from receipt of an item until transfer of accountability or disposal.

DATA REQUIREMENTS

The Property Management Plan **shall** describe the processes and activities by which the Contractor will assist the Government in compliance and execution of its property management responsibilities, described in the NOAA Personal Property User's Guide.

The Property Management Plan **shall** describe the processes that will be used to maintain records of all property, report untagged controlled equipment to the NOAA Property Administrator, maintain the physical inventory of controlled equipment, provide monthly transaction reports and quarterly property inventory reports, maintain property forms (identifying transferred, shipped, disposed of, or modified property), provide identification and reporting of equipment no longer required, and provide continuing surveillance to ensure that equipment is properly used and physically protected.

PM 14 Personal Property Inventory

Table 2

DESCRIPTION/PURPOSE

The Property Inventory provides the annual property inventory of NOAA personal property in the possession of the contractor.

DATA REQUIREMENTS

The Property Inventory **shall** be submitted as input to the Government's Property Inventory.

The Property Inventory **shall** provide the annual inventory of all NOAA property associated with the task order that is in the possession of the contractor at the time of the inventory.

The Property Inventory shall include, for each item, the item description and quantity.

The Property Inventory **shall** include, for each item, the item identification number(s).

The Equipment Identification List (EIL) **shall** be prepared and maintained throughout the life of the project.

The EIL **shall** be compiled by the contractor and include the following information at a minimum: Equipment/Part name, Equipment/Part number, Equipment Serial number, Manufacturer, Manufacturer's generic part number, and Procurement cost and specification.

The EIL **shall** be provided in an electronic searchable spreadsheet format.

The EIL changes from the last revision **shall** be clearly noted (identified with date and revision level).

PM 15 Work Breakdown Structure (WBS)

Table 2

DESCRIPTION/PURPOSE

The Work Breakdown Structure (WBS) provides a graphical depiction of the discrete work elements required to achieve the end product. The WBS provides the framework for project controls including scope, schedule, and cost.

DATA REQUIREMENTS

The WBS shall follow the guidance set forth in MIL-HDBK 881 and DI-MGMT 81334B.

The WBS **shall** consist of two parts:

- 1) An index/outline
- 2) A WBS Dictionary

The WBS Dictionary shall contain the level of the WBS, the element it defines, and the definition.

Updates to the WBS shall be reflected in the WBS Dictionary.

The WBS shall be extended to the lowest level necessary to manage the work.

The minimum reporting level **shall** be at the development contractor WBS level 3, as specified in Section 3 of the ESPDS Work Breakdown Structure Dictionary [ODS-ESPDS-WBS-F-001].

The WBS and dictionary **shall** be maintained and updated throughout the life of the contract.

The WBS structure **shall** be used for all contract reporting. Prior approval of the Government is required for any changes to the WBS structure at the reporting level.

The first WBS submission **shall** be made no later than 60 days after contract award. Subsequent dates of submission **shall** be made as required, or upon major revision.

The WBS shall be submitted in electronic format.

FM 1 Contract Funds Status Report

Table 3

DESCRIPTION/PURPOSE

The Contract Funds Status Report (CFSR) provides information regarding task order funding requirements.

DATA REQUIREMENTS

The Contract Funds Status Report (CFSR) **shall** be submitted in accordance with DI-MGMT-81468.

The CSFR **shall** be submitted electronically in a delivery method deemed acceptable by the Government. Contractor-equivalent format is acceptable.

NOAA-ESPDS-CDRL-R10-008

CC 1 Document Tree

Table 4

DESCRIPTION/PURPOSE

The Document Tree provides a reference list of all Project documents.

DATA REQUIREMENTS

The Document Tree **shall** include all documents for each WA and show relationship(s) between documents, WA phasing, and maturation phasing.

The Document Tree **shall** be organized and identified to serve as a ready reference list.

The Document Tree **shall** identify documents by name and number.

The Document Tree **shall** include a brief description defining the scope of each document.

NOAA-ESPDS-CDRL-R10-008

CC 2 Specification Tree

Table 4

DESCRIPTION/PURPOSE

The Specification Tree provides a reference list of all project specifications.

DATA REQUIREMENTS

The Specification Tree **shall** list all contractor prepared project specifications, including Interface Requirement Specifications for each WA.

The Specification Tree **shall** display hierarchical relationships between the specifications.

The Specification Tree shall be organized and identified to serve as a ready reference list.

The Specification Tree **shall** identify specifications by name and number.

The Specification Tree **shall** include a brief description of each specification.

CC 3 Change Requests (CR)

Table 4

DESCRIPTION/PURPOSE

Facilitates the orderly processing of change requests to specifications and requirements, and changes to plans and procedures, in order to achieve the appropriate level of review, classification, and approval authority for disposition

DATA REQUIREMENTS

The CR shall be submitted in accordance with the Government's Change Control Plan (CCP).

The CR **shall** contain sufficient information in the form of attachments, drawings, test results, etc., to allow the Government to evaluate the total impact of the proposed change.

CRs affecting the task order or WA **shall** be prepared according to FAR Clause 52.243-7 "Notification of Changes".

CC 4 Configuration Item Identification List

Table 4

DESCRIPTION/PURPOSE

Helps establish a structure for controlling the configuration of the ESPDS by identifying all Configuration Items (CIs) used for the Work Applications and correlating those CIs to their Specification and test requirements documents.

DATA REQUIREMENTS

The Configuration Item Identification List shall identify all CIs.

The Configuration Item Identification List shall be submitted as an Excel 2003 file.

The Configuration Item Identification List **shall** be submitted in accordance with the current ESPC System CI DB Design document.

The Configuration Item Identification List **shall** be organized and broken down by ESPC-level CI.

In addition, the Configuration Item Identification List **shall** provide the following information for each CI listed:

- 1. Assigned CI Number
- 2. CI top drawing number
- 3. CI nomenclature
- 4. Applicable specification number
- 5. Acceptance test procedure number
- 6. If qualification tested, the qualification test procedure number

(If the CI is neither acceptance nor qualification tested, the functional test procedure number should be entered in the test procedure column. For those CI not governed by a specification, the word "NONE" should be entered in the applicable specification column.)

The Configuration Item Identification List **shall** provide the following additional information for each software CI:

- 1. Classification of the CI
- 2. Version number
- 3. applicable software requirements specification number
- 4. indication of whether any part of the CI is safety or mission critical

CC 5 Configuration Item Control Board Documentation

Table 4

DESCRIPTION/PURPOSE

The Configuration Item Control Board (CICB) documentation is provided as input for the CICB meeting.

DATA REQUIREMENTS

The CICB Documentation **shall** include the CICB Agenda, CICB Data Packages, and CICB Minutes.

The CICB Data Packages **shall** contain, for each change, the precise format and content that will be reviewed by the contractor's board.

The CICB Data Packages **shall** contain all relevant background material (including written agreements and memos between the Government and the contractor) and complete technical supporting analyses.

The CICB Minutes **shall** include the date, time, location, item subject, change control number, and CCB disposition of the changes reviewed.

The CICB Minutes **shall** adhere to the delivery schedule for Meeting Minutes [PM 5].

The CICB Minutes shall include a list of actions generated from the CICB for each change.

The CICB Minutes **shall** include the date each action is to be completed.

The CICB Data Package **shall** include the change classification and affectivity for approved changes.

The CICB Minutes **shall** include a reason(s) when changes are disapproved.

CC 6 Engineering Deviations and Waivers Table 4

DESCRIPTION/PURPOSE

Facilitates the orderly processing of engineering deviations and waivers to contractor specifications and requirements in order to achieve the appropriate level of review, classification, and approval authority for disposition

DATA REQUIREMENTS

The deviation **shall** require Government written authorization specifying the deviation and impact prior to the development of a configuration item. Contractor format is acceptable.

The waiver **shall** require Government written authorization to accept a configuration item which, during development, or after having been submitted for inspection or acceptance (including test), is found to depart from specified requirements, but nevertheless is considered suitable for use "as is" or after repair by an approved method. Contractor format is acceptable.

Deviations or waivers **shall** include the business/project need, what is being waived/ deviated from, the project impacts, the reason for acceptability, and any supporting documentation.

CC 7 Configuration Management Plan Table 4

DESCRIPTION/PURPOSE

The configuration management plan provides the detailed process for managing configuration items and will integrate the process outlined in the integrated change control section within the PMP.

DATA REQUIREMENTS

The Configuration Management Plan **shall** describe the oversight, roles and responsibilities for managing configuration items and specifications.

The Configuration Management Plan **shall** describe the implementation and integration of tools used to implement the management of configuration items and specifications.

The Configuration Management Plan **shall** describe how configuration items will be identified, managed, developed, tested, and placed under baseline control.

The Configuration Management Plan **shall** detail the various Configuration Management activities by project phase (concept, development, test, integration, production, and transition to operations).

The Configuration Management Plan **shall** include the approach for the verification, control, and audit of configuration items.

The Configuration Management Plan **shall** describe the Configuration Management process and include the integration approach with quality assurance.

The Configuration Management Plan **shall** describe data and interface management processes.

The Configuration Management Plan **shall** describe the process for engineering deviations and waivers.

The Configuration Management Plan **shall** describe the process for recording and tracking development errors.

The Configuration Management Plan **shall** describe the hardware and software development controls and processes.

The Configuration Management Plan **shall** describe the process for updating the Document, Drawing, and Specification Trees.

The Configuration Management Plan **shall** describe how changes to the Document, Drawing, and Specification Tree are identified.

CC 8 Anomaly Tracking List

Table 4

DESCRIPTION/PURPOSE

The anomaly tracking list provides a record of errors that can assist in risk assessment, expense analysis, and resolutions for future trouble-shooting, the intended audience would be system engineers.

DATA REQUIREMENTS

The Anomaly Tracking List **shall** track all development errors and include the module, WA, programmer, tester, defects/bugs not requiring quality assurance, status (open, closed, fixed), and test results (pass, fail).

The Anomaly Tracking List **shall** provide data related to fixing and testing the error.

The Anomaly Tracking List **shall** provide the location of supporting documents, screen shots, or emails.

IS 1 Developmental Subsystem (Security) Plan $\,$ DSS $\,$ Table 5

DESCRIPTION/PURPOSE

A System Security Plan is currently in place for the ESPC. Before deliveries are installed and made operational, an update to the Plan must be approved and incorporated into the design to ensure ESPC information resources will be protected.

DATA REQUIREMENTS

A Developmental Sub-System (Security) Plan **shall** be developed in accordance with current DOC and NOAA policy and in coordination with the ESPC Information System Security Officer (ISSSO) for each ESPDS subsystem.

The Developmental Subsystem (Security) Plan **shall** comply with Federal laws and regulations including, but not limited to:

- 1. OMB Memoranda and Bulletins
- 2. Federal Information Security Management Act (FISMA) of 2002 (Title III of the E-Government Act of 2002)
- 3. National Institute of Standards and Technology (NIST) 800 Series Publications
- 4. NIST Federal Information Processing Standards

The Developmental Subsystem (Security) Plan **shall** apply Information Technology (IT) security requirements for all phases of the system life cycle in accordance with NIST SP 800-64, Security Considerations in the System Development Life Cycle, DOC System Development Lifecycle, the laws, statutes, and regulations on the NOAA IT security web page, in the NOAA IT Security Manual, the NESDIS IT Security Manual, in the US Department of Commerce (DOC) IT Security Program Policy, and all relevant ESPC/ESPDS policies and practices.

The Developmental Subsystem (Security) Plan **shall** comply with DOC and NOAA Enterprise Architecture requirements.

The Developmental Subsystem (Security) Plan Plan **shall** comply will all rules, regulations, policies, procedures, schedules, etc., associated with the management and operations of the System.

IS 1 E-Authentication Package Table 5

DESCRIPTION/PURPOSE

The E-Authentication Package documents the results of the E-Authentication Threshold Analysis and E-Authentication Risk Assessment.

DATA REQUIREMENTS

The E-Authentication Package **shall** be in accordance with OMB M-04-04 E-Authentication Guidance for Federal Agencies and NIST SP 800-63, Electronic Authentication Guideline, in order to determine the proper authentication Assurance Level to be implemented for the 'evolved' ESPC to prevent unauthorized access and modification of NOAA sensitive or critical information.

The E-Authentication Package **shall** document the results of the E-Authentication Threshold Analysis using the DOC E-Authentication Threshold Analysis Tool.

The E-Authentication Package **shall** document the results of the E-Authentication Risk Assessment using the DOC E-Authentication Risk Assessment Tool.

The E-Authentication Package **shall** use the versions of the DOC E-Authentication Threshold Analysis and DOC E-Authentication Risk Assessment Tools provided by the Government following task order award.

IS 2 Privacy Threshold Analysis/ Privacy Impact Assessment Table $\mathbf 5$

DESCRIPTION/PURPOSE

Documents the results of analysis of how personally identifiable information is collected, stored, protected, shared and managed.

DATA REQUIREMENTS

The Privacy Threshold Analysis/Privacy Impact Assessment **shall** use the PIA Template and follow NOAA Privacy Impact Assessment Guidance.

IS 3 Security Authorization Inputs Table 5

DESCRIPTION/PURPOSE

The Security Authorization Input Report provides inputs to the ESPC Security Authorization package. Inputs will represent a comprehensive assessment of the management, operational, and technical security controls for all deliveries, to describe the extent to which the controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting the security requirements for the system.

DATA REQUIREMENTS

The Security Authorization Input Report **shall** document the proposed and/or implementation status of the management, operational and technical IT security controls for each WA.

The Security Authorization Inputs **shall** follow the security controls noted in the current edition of NIST SP 800-53, *Recommended Security Controls for Federal Information Systems and Organizations*, as supplemented by DOC, NOAA and NESDIS.

The Security Authorization Input Report **shall** document the proposed and/or implementation status of the IT Security Controls for each WA using the NOAA Annual Security Control Assessment Report Template and relevant NIST Special Publications.

SE 1 Systems Engineering Management Plan (SEMP) Table 6

DESCRIPTION/PURPOSE

The Systems Engineering Management Plan documents the contractor's planned method of identifying and conducting all system engineering-related activities under this task order.

DATA REQUIREMENTS

The Systems Engineering Management Plan **shall** comply with the content specified by DI-MGMT-81024 as tailored below:

- 1. Block 10, Preparation Instructions: In addition to the elements of the system engineering process identified, the narrative **shall** include the following elements: data management, quality control, requirements management, and prototyping
- 2. Contractor format is acceptable

The Systems Engineering Management Plan **shall** describe how the contractor's system engineering activities relate to the Government's ESPDS Project system engineering activities as captured in the Government's System Engineering Management Plan.

The Systems Engineering Management Plan **shall** describe how the contractor's system engineering activities support the Government's enterprise architecture development approach.

The Systems Engineering Management Plan **shall** describe the overall development lifecycle including the major systems engineering activities for each phase.

The Systems Engineering Management Plan **shall** describe the overall approach for identifying and using tools, and identify planned tool usage.

The Systems Engineering Management Plan **shall** describe the types of mathematical and simulation models to be used to support System Engineering activities.

The Systems Engineering Management Plan **shall** define the reliability philosophy and what reliability analyses are planned, who is responsible, and how the analyses are to be accomplished, including the use of any special tools.

The Systems Engineering Management Plan **shall** define when and how often reliability analyses are to be performed.

The Systems Engineering Management Plan **shall** define the Systems Engineering Organization Chart and Job Responsibilities.

The Systems Engineering Management Plan **shall** correlate system engineering activities with major program milestones and reviews.

The Systems Engineering Management Plan **shall** include the resource budgets Systems Engineering will track, the margin philosophy, who will collect the inputs, how often they will be collected, when allocation of the budgets are due, and when they will be placed under formal configuration management.

The Systems Engineering Management Plan **shall** describe methods and tools used for communicating systems engineering activities, progress, status and results, including any periodic meeting or working groups.

The Systems Engineering Management Plan **shall** describe the method and tools used to store and distribute System Engineering information generated during the course of the lifecycle.

SE 2 'To Be' Architecture

Table 6

DESCRIPTION/PURPOSE

Describes the desired state for the ESPC's processes and systems; how those planned improvements relate to the 'As-Is' architecture, ESPC Evolution Plan and WAs; and how those improvements are being achieved through implementing planned Deliveries.

DATA REQUIREMENTS

The 'To Be' Architecture shall include the following:

- 1. Identification of requirements (Referencing requirement documents is acceptable)
- 2. Analysis of the As-Is Architecture
- 3. Identification of a reference architecture
- 4. Gap analysis assessment
- 5. Definition of phased To-Be architecture(s)
- 6. Development of a implementation roadmap, including WA need dates

The 'To Be' Architecture **shall** maximize cost avoidance opportunities through use of COTS and GOTS software, hardware, and storage solutions.

The 'To Be' Architecture **shall** describe how systems operating under the 'As-Is' architecture will interact with and not impact systems developed under the 'To Be' architecture.

The 'To Be' Architecture **shall** identify IT security solutions and policies that are in strict accordance with established Federal policy and standards.

The 'To Be' Architecture **shall** specify system solutions that utilize service oriented architecture industry standards while complying with Federal enterprise architecture (EA) policy and guidance.

The 'To Be' Architecture shall be phased as follows:

- 1. Near-Term Phase (The current and the next BY): The IT investments identified within this interval have approved budgets, and in many cases, are well along in their development
- 2. Mid-Term Phase (The two budget years following the Near-Term phase): The IT investments identified for completion within this interval, have approved budgets in some cases, and are developing requirements or identifying solutions but may not be in full scale development
- 3. Long-Term Phase (The two budget years following the Mid-Term phase): The IT initiatives in this interval are most often in the information gathering and concept development stage; many of these initiatives still require formalization within NESDIS

The 'To Be' Architecture **shall** be delivered using IBM, formerly Telelogic®, System Architect for DoDAF Interface.

SE 3 Operations Concept

Table 6

DESCRIPTION/PURPOSE

Describes the proposed development in terms of the operator and user needs it will fulfill, its relationship to the ESPC and to existing systems and procedures, and the external operational interfaces.

DATA REQUIREMENTS

The Operations Concept shall be delivered as inputs to the overall ESPC Operations Concept.

The Operations Concept Description **shall** include content identified in DI-IPSC-81430A. Contractor equivalent format is acceptable.

SE 4 Requirements Specifications Table 6

DESCRIPTION/PURPOSE

Requirements Specifications contains the requirements for a system and the qualification methods to be used to ensure that each requirement has been met. Requirements pertaining to the system's external interfaces may be presented in these specifications or in one or more Interface Requirements Specifications [SE 5]. The Requirements Specifications are used as the basis for design and testing of a system.

DATA REQUIREMENTS

Requirements Specifications **shall** contain the content specified in DI-IPSC-81431A and MIL-STD-961E. Tailoring of the referenced documents will be contingent on Government approval. Contractor equivalent format is acceptable.

Requirements Specifications **shall** contain all requirements allocated and derived from the applicable Work Assignment document packages, which include Government requirements specifications and existing interface documentation.

Requirements Specifications **shall** capture requirements at all levels from ESPDS segment, element, sub-system level through CI.

Requirements Specifications shall be delivered as input to the overall segment requirements.

Requirements Specifications **shall** identify and partition any existing segment requirements allocated to the delivered capability.

Requirements Specifications **shall** identify and partition any concurrent Work Assignment specification requirements allocated to the delivered capability.

Requirements Specifications **shall** document allocation of higher-level specification performance levels in lower-level specifications.

Requirements Specifications **shall** be delivered in an archived DOORS Project that includes a module of the specification itself, modules of the higher- and lower-level specifications to which this specification traces directly, and the associated link modules.

Requirements Specifications shall show allocation from CI to component in the archived DOORS project file.

SE 5 Interface Requirements Specification (IRS) Table 6

DESCRIPTION/PURPOSE

The Interface Requirements Specification specifies the requirements imposed on one or more systems, subsystem, Hardware Configuration Item (HWCI), Computer Software Configuration Item (CSCI), manual operations, or other system components to achieve one or more interfaces among these entities. An IRS can cover any number of interfaces.

DATA REQUIREMENTS

The Interface Requirements Specification **shall** contain the content specified in DI-IPSC- 81434A. Tailoring of the referenced document will be contingent on Government approval. Contractor equivalent format is acceptable.

The IRS **shall** define interface requirements between the delivered capability and all external interfaces.

The IRS **shall** define interface requirements among the major functional segments of ESPDS including Ingest, Product Generation, Product Distribution, Infrastructure wherever the delivered capability crosses segment boundaries.

The IRS **shall** be delivered in an archived DOORS Project that includes a module of the specification itself, modules of the higher- and lower-level specifications to which this specification traces directly, and the associated link modules.

SE 6 Interface Control Document (ICD) Table 7

DESCRIPTION/PURPOSE

Interface Control Document describes the interface characteristics of one or more system, subsystem, Hardware Configuration Item (HWCI), Computer Software Configuration Item (CSCI), manual operations, or other system components. An ICD may describe any number of interfaces. ICDs and their companion Interface Requirements Specifications (IRS) serve to communicate and control interface design decisions. The IRS specifies interface requirements; the ICD describes the interface characteristics selected to meet those requirements.

DATA REQUIREMENTS

The Interface Control Document **shall** contain the content specified in DI-IPSC- 81436A. Tailoring of the referenced document will be contingent on Government approval. Contractor equivalent format is acceptable.

The ICD **shall** provide a description of the physical and functional characteristics of interfaces between the delivered capability and all external entities.

The ICD **shall** provide a description of the physical and functional characteristics of interfaces between any major ESPC functional segments (Ingest, Product Generation, Product Distribution, Infrastructure) wherever the delivered capability crosses segment boundaries.

The ICD **shall** be delivered in an archived DOORS Project that includes a module of the specification itself, modules of the higher- and lower-level specifications to which this specification traces directly, and the associated link modules.

SE 8 Verification & Validation Plan

Table 6

DESCRIPTION/PURPOSE

The V&V Plan describes the overall approach for accomplishing requirements verification and design validation. It includes the methodologies and processes that will be used to ensure that the delivered capability can be verified and validated against all Work Assignment requirements.

DATA REQUIREMENTS

The V&V Plan **shall** describe the Contractor's verification and validation philosophy.

The V&V Plan **shall** document the methodology that will be implemented in order to verify and validate a delivered capability.

The V&V Plan **shall** identify management and technical roles, responsibilities and resources needed to successfully complete verification and validation of a delivered capability.

The V&V Plan **shall** describe the relationship and interaction between the V&V Plan and the Integration and Test Plan [IT 1].

The V&V Plan **shall** describe how test data required to exercise the delivered capability will be generated when such data is not provided by the Government.

The V&V Plan shall describe the use of Government provided test data in verification activities.

The V&V Plan **shall** describe planned use of test beds, including development schedules if applicable.

The V&V Plan **shall** correlate verification and validation phases with major program milestones and reviews.

The V&V Plan **shall** describe the process for assigning verification and validation activities to Work Assignment requirements.

The V&V Plan **shall** describe the flow-down of verification requirements through the hardware and software end-item level.

The V&V plan **shall** describe the requirements verification and validation process.

The V&V Plan **shall** describe the process for tracking and reporting design compliance and any compliance issues that may arise.

The V&V Plan shall document the deviation and waiver process.

The V&V Plan **shall** describe the process for assessing and repeating verification and validation activities for a verified and validated design when that design is altered by a subsequent Work Assignment.

The V&V Plan **shall** identify the process for addressing any limitations in the ability, including the risk associated with those limitations, to verify a requirement.

The V&V Plan **shall** include an example Performance Verification Matrix (PVM) as detailed in [SE 10].

The V&V Plan shall include an example Performance Verification Report as detailed in [SE 9].

SE 9 Performance Verification Reports Table 6

DESCRIPTION/PURPOSE

Performance Verification Reports provide a summary of design compliance or non-compliance with stated requirements based on results obtained through conduct of a verification activity.

DATA REQUIREMENTS

The Performance Verification Reports shall include, as a minimum:

- 1. A description of the verification activity
- 2. A summary of the verification activity objectives, including requirements to be verified by the activity, and the degree to which they were met
- 3. Specific results of the verification activity
- 4. Descriptions of deviations from nominal results, problems/failures, approved anomaly corrective actions, and retest activities
- 5. A summary of nonconformance/discrepancy reports, including dispositions
- 6. Conclusions and recommendations relative to the verification activity, including a statement of design compliance for each requirement that was to be verified by the activity
 - a. For any non-compliances, an alternate plan to achieve design compliance or waiver of the requirement must be presented
- 7. Authentication of the verification activity results and authorization of acceptability
- 8. For Test verification activities
 - a. Specific results of the test or procedure
 - b. The associated Post-Test Data Packages [IT 4]
 - c. Any associated Post-Test Data Analysis Reports [IT 3]
- 9. For Analysis verification activities
 - a. Specific results of the analysis
 - b. Any associated Analysis Report
 - c. Version of any models, analytical tools, and data used
- 10. For Demonstration verification activities
 - a. Specific results of the demonstration
 - b. System configuration
 - c. Any associated As-Run procedure
- 11. For Inspection verification activities
 - a. Specific results of the inspection activity

b. Completed inspection report

Performance Verification Reports **shall** be delivered in electronic format (Microsoft Office). Contractor preferred format is acceptable.

SE 10 Performance Verification Matrix Table 6

DESCRIPTION/PURPOSE

The Performance Verification Matrix (PVM) identifies every verification activity required to show design compliance with Work Assignment requirements. Once a verification activity has been completed, the PVM provides references to the documentation that show that the design is compliant.

DATA REQUIREMENTS

The PVM **shall** identify all verification activities required to show design compliance to all applicable Work Assignment requirements.

The PVM **shall** identify all verification activities required to show design compliance to all requirements allocated and derived from the applicable Work Assignment document packages.

The PVM **shall** include the following, as a minimum, for each requirement:

- 1. Requirement identifier
- 2. Requirement title
- 3. Verification criteria
- 4. Verification method
- 5. Verification activity(ies) identifier(s)
- 6. Verification activity(ies) title(s)
- 7. Compliance status
- 8. Summary of measured performance
- 9. Performance Verification Report reference number(s)
- 10. Deviation or Waiver reference number(s) (as applicable)

The PVM shall identify all the requirements to be verified by a verification activity.

The PVM **shall** include a description, including pass/fail criteria, of every identified verification activity.

The PVM **shall** be delivered in an archived DOORS Project that includes a module of the PVM itself, modules of the specifications and interface requirements to which the PVM traces directly, and the associated link modules.

The PVM **shall** be updated and delivered with each Performance Verification Report [SE] submittal.

The PVM **shall** indicate changes since the last submittal. The Government will release updated .dma archives following the approvals of CCRs.

Government DOORS modules **shall** be replaced with new modules as received from the Government and link traceability updated, as necessary.

All DOORS links **shall** start in higher-level specifications and end in the PVM.

SE 11 Modeling and Simulation Plan Table 6

DESCRIPTION/PURPOSE

The Modeling and Simulation (M&S) Plan documents the M&S strategies across all development and guides the use of M&S through the entire life cycle. It describes the proposed Modeling and Simulation capabilities and how they will be used for prototyping, design, verification and validation, operations, and sustainment purposes.

DATA REQUIREMENTS

The Modeling and Simulation Plan **shall** describe capabilities and approach to develop and use simulation and modeling capabilities to support development and transition, including design, testing, analysis, and verification activities.

The M&S Plan **shall** describe contractor capabilities and approach to develop and use simulation and modeling capabilities to support operations; training; algorithm upgrades, operational integration, and sustainment.

The M&S Plan **shall** describe contractor capabilities and approach to develop and use simulation and modeling capabilities to support future system planning activities and existing growth.

The M&S Plan **shall** describe contractor capabilities and approach to develop and use simulation and modeling capabilities to support potential increases in performance (e.g., latency and availability) and efficiency (automation).

The M&S Plan **shall** identify what models and simulations will be developed, delivered, received as Government Furnished Property and used during the life cycle.

The M&S Plan **shall** identify existing and available models and simulations that may be used during the life cycle.

The M&S Plan **shall** describe verification and validation performed and M&S certification status of all models developed, received, or modified.

The M&S Plan **shall** describe issues and risks involved with this M&S approach.

The M&S Plan **shall** describe future use of all M&S to be developed, including evolution and refresh of technology.

The M&S Plan shall define environment and infrastructure requirements for all M&Ss to be used.

The M&S Plan **shall** discuss schedule requirements and availability of M&S items to support the schedule.

SE 12 Modeling and Simulation Analysis Report Table 6

DESCRIPTION/PURPOSE

The Modeling and Simulation Analysis Report provides the results of simulation activities.

DATA REQUIREMENTS

The Modeling and Simulation Analysis Report **shall** contain the simulation and analysis ground rules and assumptions; design requirements; reference documents; and objective(s) of analysis.

The Modeling and Simulation Analysis Report **shall** contain the scope of analysis including specific architecture and capabilities included in analysis.

The Modeling and Simulation Analysis Report **shall** contain inputs including test case descriptions, outputs including statistical distribution, if applicable, error analyses, and results and conclusions including potential impact on design and risk decisions.

The Modeling and Simulation Analysis Report shall contain all calculations relevant to the analysis.

The Modeling and Simulation Analysis Report **shall** contain recommendations to correct any problems or potential problems noted during the analysis.

SE 13 Design Description

Table 6

DESCRIPTION/PURPOSE

Describes the architecture and design, and establishes the top-level design and interface description(s) placed on a WA.

DATA REQUIREMENTS

The Design Description **shall** contain the content specified in DI-IPSC-81432A. Contractor-equivalent format is acceptable.

The Design Description shall be delivered as input to the overall ESPC Design Description.

The Design Description **shall** indicate whether potential faults of functions and segments impact system operations.

The Design Description **shall** include safety and assurance requirements.

The Design Description shall include unique identifiers for each requirement.

SE 14 Database Design Description Table 6

DESCRIPTION/PURPOSE

The Database Design Description describes the design of each contractor-delivered database, that is, each collection of related data stored in one or more computerized files in a manner that can be accessed by users or computer programs via a database management system. It can also describe the software units used to access or manipulate the data.

The Database Design Description is used as the basis for implementing the databases and related software units. It provides the visibility into the designs and provides information needed for software support.

DATA REQUIREMENTS

The Database Design Description shall be delivered as input to ESPC Database Design Description.

The Database Design Description (DBDD) **shall** contain the content specified in DI-IPSC-81437A. Contractor equivalent format is acceptable.

The DBDD shall include all ESPDS-delivered databases.

SE 15 Engineering Drawings and Change Notices Table 6

DESCRIPTION/PURPOSE

Engineering Drawings and Change Notices provide layouts and engineering drawings, and the changes to them, which serve as the basis for technical discussions, evaluations, operations, and maintenance.

DATA REQUIREMENTS

Engineering Drawings and Engineering Drawing Change Notices **shall** include the engineering drawings used to procure, manufacture, assemble, integrate, and test the down to the CI level. Lower-level drawings will be provided upon request.

The Engineering Drawings and Engineering Drawing Change Notices **shall** be delivered as inputs to the overall ESPC Engineering Drawings and Engineering Drawings Change Notice Package.

Engineering Drawings and Change Notices **shall** include all reference-type drawings such as layouts, schematics, and diagrams.

Engineering Drawings and Change Notices shall not use Sketch-type drawings.

All Engineering Drawings **shall** be prepared in accordance with the contractor's core-level drawing requirements manual.

All Engineering Drawings **shall** be made available to Government personnel in electronic format. Drawings not available in electronic format may be submitted in hardcopy upon request from the Government.

SE 16 Study and Analysis Reports

Table 6

DESCRIPTION/PURPOSE

Provide the Government with recommendations/rationale to support decision making.

DATA REQUIREMENTS

Studies and Analysis Reports are used to select a solution from a set of proposed viable alternatives based on defined criteria.

Studies and Analysis Reports shall include a clear statement of the problem

Studies and Analysis Reports **shall** include the purpose, objectives, ground rules and assumptions including constraints

Studies and Analysis Reports shall include an applicable documents list

Studies and Analysis Reports **shall** include a study summary of methodology used for study or analyses including details of any simulation or modeling used

Studies and Analysis Reports **shall** include a requirements summary to include the list of requirements needed to be satisfied. The requirements will be at the appropriate level to show what the trade study is accomplishing. These could be system, SRS or even design or development environment requirements.

Studies and Analysis Reports shall include the evaluation criteria and metrics

Studies and Analysis Reports **shall** include the following criteria in studies (where applicable):

Development cost

Lifecycle cost

Requirements compliance: (Functional, Performance, Operational, Programmatic)

Technical risk (Maturity)

Budget risk

Schedule risk

Operational complexity

Vendor assessment

System maturity

Development support tools

Test support tools

Development team familiarity with candidate hardware and software

Quality of logistics support

Studies and Analysis Reports **shall** include alternative solutions to include rationale on items that were chosen or not chosen for this study

Studies and Analysis Reports shall include recommendations with supporting rationale

Studies and Analysis Reports **shall** include impacts to contract cost, schedule, and performance baselines as well as any risks associated with implementation of alternatives

RE 1 Test Readiness Review Package Table 7

DESCRIPTION/PURPOSE

The Test Readiness Review (TRR) will determine whether adequate plans, procedures, resources, test cases, and criteria have been established prior to initiating the testing activities. The TRR also determines if the testing supports the applicable verification requirements. The TRR Package will provide information to enable the full review.

DATA REQUIREMENTS

If the Test Readiness Review includes multiple test events, individual test plans and procedures may be generated as appendices to the Test Readiness Review Package or included as separate sections within the Test Readiness Review Package.

Paper copies of the package **shall** be delivered to the location of the review for use during the review.

The Test Readiness Review Package **shall** address the information specified in DI-IPSC-81439A.

RE 2 Pre-Ship Review (PSR) Packages Table 7

DESCRIPTION/PURPOSE

The PSR verifies the completeness of the subject deliverable(s) with respect to the expected maturity level. The PSR examines the deliverable(s) and the associated documentation, and test data and analyses that demonstrate the required level of functional and performance verification. It also ensures that the deliverable(s) have sufficient technical maturity to authorize transfer to the operational sites for the next level of integration and test.

The objectives of the PSR are to demonstrate that: (a) all required functional and performance testing has been successfully completed; (b) all discrepancies are fully understood and satisfactorily resolved, including completion of corrective actions as well as planning and preparation of any required follow-on actions; and (c) planning and preparation for transfer and subsequent ground integration, test, and operations are complete.

Each PSR Package will provide the information to enable a full review.

DATA REQUIREMENTS

Each PSR Package shall include the responses to action items generated at prior reviews.

Each PSR Package **shall** include the solutions to all problems encountered during the factory integration and test activities and the solution rationale.

Each PSR Package **shall** include any rework/replacement of software or hardware, regression testing, and test plan changes.

Each PSR Package **shall** include compliance with the integration and test plan and verification plan and verification matrix.

Each PSR Package **shall** address "could-not-duplicate failures" along with assessment of the problem and the residual risk that may be inherent in the item.

Each PSR Package shall include an assessment of any residual risk.

Each PSR Package **shall** include any updates to site readiness and plans for site integration and test, support to DOST activities, transition to operations, and operations and sustainment activities.

Each PSR Package shall include plans for storage of the deliverable, if required.

Paper copies of the package **shall** be delivered to the location of the review for use during the review.

RE 3 Readiness Review Packages

Table 7

DESCRIPTION/PURPOSE

The Readiness Review will include a summary of the integration and test results, conformance, non-conformance, and trend data so that a determination can be made of the readiness of the WA to the Government for integration with the ESPC or testing with ESPC interfaces. The Readiness Review data package will provide the information necessary to make that readiness determination.

DATA REQUIREMENTS

Each Package shall include the:

- 1. Responses to action items generated at prior reviews
- 2. Solutions to all problems encountered during the factory integration and test activities and the solution rationale
- 3. Rework/replacement of software or hardware, regression testing, and test plan changes
- 4. Compliance with the Integration And Test Plan and Verification Plan and Performance Verification Matrix
- 5. Assessment of any residual risk
- 6. Plans for storage of the deliverable, if required
- 7. CDRL IT 3
- 8. CDRL IT 4

Paper copies of the package **shall** be delivered to the location of the review for use during the review.

RE 4 System Requirements Review (SRR)/ System Definition Review (SDR) Packages Table 7

DESCRIPTION/PURPOSE

The SRR examines the functional and performance requirements defined for the WA effort, and ensures that the requirements and the selected concept will satisfy the ESPC and WA requirements.

The objectives of the SRR are to confirm that:

- (a) requirements have been logically and fully allocated to their respective subsystem level or below
- (b) all allocated requirements are verifiable
- (c) all allocated requirements are traceable to their corresponding higher level requirement

The SDR reviews the proposed architecture/design and the flow down to segments, to assess readiness to begin preliminary design.

The objectives of the SDR are to:

- (a) demonstrate that the architecture/design is acceptable
- (b) demonstrate that requirements allocation is complete,
- (c) show a system that fulfills the mission objectives can be built within the constraints posed
- (d) ensure that a verification concept and preliminary verification program are defined
- (e) establish end-item acceptance criteria
- (f) ensure that adequate detailed information exists to support initiation of further development or acquisition efforts

The SRR/SDR Packages provide the information to enable a successful SRR/SDR.DATA REQUIREMENTS

The SRR/SDR data packages **shall** comply with the SRR requirements of NPR 7123.1A Appendix G that are identified for the types of goods and services being provided by the contractor.

The SDR data package **shall** comply with the SDR requirements of GSFC- STD-1001 that are identified for the types of goods and services being provided by the contractor.

Paper copies of the packages **shall** be delivered to the location of the review for use during the review.

The requirements and design reviews **shall** cover all aspects of ESPDS WA hardware, software, design, analyses, validation, integration, testing, verification, installation, transition, and operations support for which the contractor has responsibility.

RE 5 Preliminary Design Review (PDR) Packages Table 7

DESCRIPTION/PURPOSE

The objectives of the PDR are to: (a) ensure that all requirements have been allocated, the requirements are complete, and the flow-down is adequate to verify performance; (b) show that the proposed design is expected to meet the functional and performance requirements; (c) show sufficient maturity in the proposed design approach to proceed to final design; (d) show that the design is verifiable and that the risks have been identified and characterized, and where appropriate, mitigation plans have been defined; (e) show that the management processes are sufficient to support development and operations; and (f) show that the cost estimates and schedules indicate that the system will be ready to implement and operate on time and within budget and that the control processes are adequate to ensure remaining within allocated resources. The PDR Package provides the information to enable a successful PDR.

DATA REQUIREMENTS

The PDR data package **shall** comply with the PDR requirements of GSFC-STD-1001 that are identified for the types of goods and services being provided by the contractor.

The PDR data package **shall** comply with the PDR requirements of NPR 7123.1A, Appendix G that are identified for the types of goods and services being provided by the contractor.

Paper copies of the package **shall** be delivered to the location of the review for use during the review.

The requirements and design reviews **shall** cover all aspects of ESPDS WA hardware, software, design, analyses, validation, integration, testing, verification, installation, transition, and operations support for which the contractor has responsibility.

The PDR data packages **shall** report the results of the Reliability, Maintainability, and Availability (RMA) assessments and predictions.

RE 6 Critical Design Review (CDR) Packages Table 7

DESCRIPTION/PURPOSE

The CDR should represent a complete and comprehensive presentation of the entire final design. The objectives of the CDR are to demonstrate that: (a) all aspects of the design are compliant with functional and performance requirements; (b) the verification approach is viable and will confirm compliance with all requirements; (c) risks have been appropriately identified and mitigated or are on track for timely mitigation; (d) the design is sufficiently mature to proceed with full-scale development; (e) the management processes are sufficient to support development and operations support; and (f) the schedules and cost estimates indicate that the system will be ready to implement and operate on time and within budget and that the control processes are adequate to ensure remaining within allocated resources. The CDR Package provides the information to enable a successful CDR.

DATA REQUIREMENTS

The CDR data package **shall** comply with the CDR requirements of GSFC-STD-1001A that are identified for the types of goods and services being provided by the contractor.

The CDR data package **shall** comply with the CDR requirements of NPR 7123.1A, Appendix G that are identified for the types of goods and services being provided by the contractor.

Paper copies of the package **shall** be delivered to the location of the review for use during the review.

The requirements and design reviews **shall** cover all aspects of ESPDS WA hardware, software, design, analyses, validation, integration, testing, verification, installation, transition, and operations support for which the contractor has responsibility.

The CDR data package **shall** report the results of RMA assessments and predictions.

RE 7 Operational Readiness Review (ORR) Packages Table 7

DESCRIPTION/PURPOSE

The ORR examines the actual characteristics and procedures used in the operation, ensures that all hardware, software, personnel, and procedures are ready for operations, and ensures that user documentation accurately reflects the deployed state of the operation subject to the ORR.

The objectives of the ORR are to demonstrate that: (a) the plans for final end-to-end testing and simulations are sufficient, (b) the results of previous testing are recorded and discrepancies are fully understood and satisfactorily resolved, (c) if applicable, the plans for final launch and checkout are completed. The ORR Package provides the information to enable a successful ORR.

DATA REQUIREMENTS

The ORR data package **shall** comply with the ORR requirements of NPR 7123.1A, Appendix G that are identified for the types of goods and services being provided by the contractor.

Paper copies of the package **shall** be delivered to the location of the review for use during the review.

RE 8 Systems Acceptance Review (SAR) Packages Table 7

DESCRIPTION/PURPOSE

The SAR provides assurance that the implemented system is performing as expected and that all necessary support requirements are in place and functioning properly. It confirms that the system is operating properly in its production environment.

For Work Assignments that have requirements based on future spacecraft launches, the SAR will be conducted as part of pre-launch and post-launch testing and acceptance activities.

DATA REQUIREMENTS

The SAR data package **shall** comply with the SAR requirements of NPR 7123.1A, Appendix G that are identified for the types of goods and services being provided by the contractor.

Paper copies of the package **shall** be delivered to the location of the review for use during the review.

HW 1 Hardware COTS Modification Report

Table 8

DESCRIPTION/PURPOSE

The HW COTS Modification Report documents the rationale for, and impact of, modifying COTS hardware.

DATA REQUIREMENTS

The HW COTS Modification Report **shall** provide a description and justification for modifying COTS hardware.

The HW COTS Modification Report **shall** identify the lifecycle impacts of modifying the HW COTS including documentation, maintenance, and warranty.

The HW COTS Modification Report shall provide a risk assessment on modifying COTS hardware.

HW 2 Hardware Installation Plan Table 8

DESCRIPTION/PURPOSE

The Hardware Installation Plan defines the Hardware installation activities and associated milestones.

DATA REQUIREMENTS

The Plan **shall** include a list of licenses and their expiration dates.

The Plan **shall** include a document overview that summarizes the purpose and contents of this document and any security or privacy considerations associated with its use.

The Plan **shall** describe its relationship, if any, to other plans.

The Plan **shall** list the number, title, revision, and date of all documents cited within.

The Plan **shall** identify and describe the resources needed to support the deliverable hardware, including items needed to control, copy, and distribute the software and its documentation, to specify, design, implement, document, test, evaluate, control, copy, and distribute modifications to the software and to maintain, trouble shoot, repair, replace, and upgrade hardware.

The Plan **shall** identify and describe the delivered hardware and associated documentation, which may include computers, peripheral equipment, hardware simulators, stimulators, emulators, diagnostic equipment, and non-computer equipment.

The Hardware description **shall** include specific models, versions, and configurations, rationale for the selected hardware, reference to user/operator manuals or instructions for each item, as applicable, information about manufacturer support, licensing, and data rights, including whether the item is currently supported by the manufacturer, whether it is expected to be supported at the time of delivery, whether licenses will be assigned to the Government, and the terms of such licenses, and security and privacy considerations, limitations, or other items of interest.

The Plan **shall** identify any other documentation needed to support the deliverable including, for example, plans, reports, studies, specifications, design descriptions, test cases/procedures, test reports, user/operator manuals, and support manuals for the deliverable hardware.

This Other Documentation paragraph **shall** provide names, identification numbers, model and serial numbers, version numbers, and release numbers, as applicable; rationale for including each document in the list; information about licensing and data rights; and security and privacy considerations, limitations, or other items of interest.

The Plan **shall** describe the personnel needed to support the deliverable hardware, including anticipated number of personnel, types and levels of skills and expertise.

The Plan **shall** identify any other resources needed to support the deliverable hardware, including any consumables together with an estimate of the type and number that should be acquired.

The Plan **shall** identify the interrelationships of the segments identified in the preceding requirements, using diagrams as appropriate.

The Plan **shall** describe all procedures, including and reflecting lessons learned, for supporting the deliverable hardware and software and associated support capabilities.

The Plan **shall** describe the contractor's plans for training, including the schedule, duration, and location for the training; the delineation between classroom training and "hands-on" training; and the provision (either directly or by reference) for familiarization with the operational hardware.

The Plan **shall** describe anticipated areas of change to the deliverable hardware.

The Plan **shall** include plans for transitioning the deliverable hardware to the Government.

The Plan **shall** include an inventory of licenses and maintenance fees for property acquired throughout the POP.

The Plan **shall** include the tracking of the inventory of licenses and maintenance fees for property acquired throughout the POP for one year after delivery to O&M.

SW 1 Software Management and Development Plan

Table 9

DESCRIPTION/PURPOSE

Defines the contractor activities required to develop and manage all software.

DATA REQUIREMENTS

The Software Management and Development Plan shall comply with requirements of NPR 7150.2.

The Software Management and Development Plan **shall** classify the software for the Development as Class D software, as defined in Appendix B of NPR 7150.2.

The Software Management and Development Plan **shall** include a table showing the compliance of the software management and development processes with NPR 7150.2 for Class D software.

The Software Management and Development Plan **shall** include the contents specified in DI-IPSC-81427A, excluding software configuration management which is to be part of the Configuration Management Plan [CC 7].

The Software Management and Development Plan **shall** include the Software Assurance Plan contents defined in NASA STD 8739.8, Software Assurance Standard (Sections 6.0 and 7.0) and in IEEE 730-2002, IEEE Standard for Software Quality Assurance Plans. In the event of conflicts between these two standards, the NASA STD 8739.8 takes precedence.

The Software Management and Development Plan **shall** address, for multiple distributed software activities, the management processes and software tools that will be used to ensure consistency, currency, and synchronization of the software activities such as requirements definition and use case development, configuration management, etc.

The Software Management and Development Plan **shall** describe the processes and tools that will be used to maintain the integrity and synchronization of the multiple baselines that will exist across multiple environments.

The Software Management and Development Plan **shall** describe software risk management approach and processes.

The Software Management and Development Plan **shall** describe the approach for following and updating plans, including the intervals for management review.

The Software Management and Development Plan **shall** describe the plan and approach for training personnel in the use of all delivered software and supporting facilities.

The Software Management and Development Plan **shall** document the approach and plans for hardware and software license planning, acquisition, renewal, and transition to the Government.

The Plan **shall** include an inventory of licenses and maintenance fees for property acquired throughout the POP.

The Plan **shall** include the tracking of the inventory of licenses and maintenance fees for property acquired throughout the POP for one year after delivery to O&M.

The Software Management and Development Plan **shall** document an approach to align the expirations of software licenses, software support contracts, hardware warranties, and service agreements.

The Software Management and Development Plan **shall** document the privileges and operational constraints or limitations of licenses provided.

The Software Management and Development Plan **shall** include a listing of all hardware and software licenses required (including provider; contract number; license or agreement number; and expiration date), software support contracts, hardware warranties, and service agreements.

SW 2 Software COTS Modification Report

Table 9

DESCRIPTION/PURPOSE

The SW COTS Modification Report documents the rationale for, and impact of, modifying COTS software.

DATA REQUIREMENTS

The SW COTS Modification Report **shall** provide a description and justification for modifying COTS software.

The SW COTS Modification Report **shall** identify the lifecycle impacts of modifying the SW COTS including documentation, maintenance, and warranty.

The SW COTS Modification Report **shall** provide a risk assessment on modifying the COTS software.

SW 3 Software Release Delivery Package

Table 9

DESCRIPTION/PURPOSE

A software delivery package is required with submittal for each formal software release of the software. There are three items comprising a software release delivery package. The first item is the delivery letter describing what is being delivered. The second item is the software on appropriate media. The third item is accompanying documentation. The final software delivery should include the operations transition plan.

DATA REQUIREMENTS

A Software Release Delivery Package **shall** be submitted with each formal software release for Project Office review.

Each Software Release Delivery Package **shall** include a Software Delivery Letter, one page in length, which defines briefly what is being delivered, contains in its attachments the details of the delivery, and identifies a point of contact for resolution of questions/misunderstandings/problems involving the WA.

Attachments which support the delivery letter are described in items listed below:

- a) Description of Delivery Contents Identify the delivery in terms of subsystem, release number(s), configuration ID(s), media type(s) (tapes, diskettes, other) and number of copies
- b) Build Instructions Provide instructions to be used in building the delivered software, including the version number of system or vendor-supplied software required to build the system. The supplier should provide evidence that these instructions have been executed prior to delivery and that the software has been built successfully using them (As Built Configuration)
- c) Special Operating Instructions Indicate any special instructions that test or operations personnel need to know in using the software. These may include, for example, the use of special simulators, changes to operational procedures, the addition of new files, file format changes, operating constraints/limitations, workaround resolutions to documented problems, operational software version numbers, and associated database version numbers
- d) List of Resolved Anomaly Reports and Change Requests
- e) List of Unresolved Anomaly Reports and Change Request.
- f) Copy of Resolved Anomaly Reports and Change Requests
- g) Copy of Unresolved Anomaly Reports and Change Requests
- h) Matrix of requirements addressed by this release (may be done by reference to mapping of requirements identified in requirements specification document)
- i) Release History Summary Matrix
- j) Inventory of the Delivered Media -Produce the inventory from the media themselves
- k) List of Release Documentation, e.g. users guide procedures

Each Software Release Delivery Package **shall** include the Software on delivery media, as agreed to by the contractor and the Government. The software product deliverable for each baseline Build includes, but is not limited to, the Source Code, Object Code, Data, and Executable Image.

Each Software Release Delivery Package **shall** contain accompanying documentation which includes, as applicable, updated copies of the Software Version Description, Software Users Manual, Software Design Document, Software Requirements Specification, Software Test Reports, and Software Maintenance Manual.

SW 4 Software Version Description

Table 9

DESCRIPTION/PURPOSE

Identifies and describes a software version consisting of one or more CSCIs (including any open source software). The SW Version description is used to release, track, and control software versions.

DATA REQUIREMENTS

The Software Version Description **shall** be submitted as input to the ESPC Software Version Description.

The Software Version Description shall be organized by subsystem by CSCI.

The Software Version Description **shall** provide a listing of all resolved and unresolved discrepancies.

The Software Version Description shall provide a listing of all COTS dependencies.

The Software Version Description shall identify new features and Problem Resolutions.

The Software Version Description **shall** provide full identification of the system and software (i.e., numbers, titles, abbreviations, version numbers, and release numbers).

The Software Version Description **shall** identify and provide Executable software (i.e., batch files, command files, data files, or other software needed to install the software on its target computer).

The Software Version Description **shall** identify and provide Software life cycle data that defines the software product.

The Software Version Description shall identify and provide version and release data.

The Software Version Description **shall** identify and provide Instructions for building the executable software including, for example, the instructions and data for compiling and linking and the procedures used for software recovery, software regeneration, testing, or modification.

The Software Version Description **shall** identify and provide Data integrity checks for the executable, object code, and source code.

The Software Version Description **shall** identify and provide Software product files (any files needed to install, build, operate, and maintain the software).

SW 5 Software Design Document

Table 9

DESCRIPTION/PURPOSE

The Software Design Document describes the contractor-procured and delivered software design and operation, for use by the software maintenance team. It describes in detail the software architecture, structure, and organization. The document describes each unit of software in terms of its interfaces (input/output), data architectures, and processing (e.g., logic, algorithms).

DATA REQUIREMENTS

The Software Design Document **shall** be submitted as input to the ESPC Software Design Document.

The Software Design Document **shall** include a design overview that contains the Design Methodology, Design Overview, Design Studies, Design Issues, and Hardware Interfaces.

The Software Design Document **shall** include a design description that contains, at a minimum, a Subsystem Description for each subsystem, a Software Description for each software segment, and a Software Interface Control Description for both software-to-software and software-to-hardware interfaces.

The Software Design Document **shall** include a description of the operations design, including Operations Scenarios and Operator-System Interfaces.

The Software Design Document **shall** include a description of the Operations, I&T, and Development Environments.

The Software Design Document **shall** include a Tree of software specifications and design descriptions.

SW 6 Software Test Plan

Table 9

DESCRIPTION/PURPOSE

Describes the plans for software unit/segment level testing, software integration testing. The plan describes the software test environment to be used for testing, identifies the tests to be performed, and provides schedules for environment, development, and test activities.

DATA REQUIREMENTS

A Software Test Plan (STP) shall be delivered for all software.

The STP shall include the appropriate content as approved by the Government in DI-IPSC-81438A.

The STP **shall** be consistent with the Integration and Test Plan [IT 1].

SW 7 Software User Manual(s)

Table 9

DESCRIPTION/PURPOSE

The Software User Manual(s) provide guidance and instruction on the use of an ESPDS segment or subsystem for ESPC operators of the segment or subsystem.

DATA REQUIREMENTS

The Software User Manual(s) shall be submitted as input to the ESPC Software User Manual(s).

The Software User Manual(s) shall be organized by subsystem by CSCI.

The Software User Manual(s) shall include the content specified in DoD DI-IPSC-81443A.

IT 1 Integration and Test Plan Table 10

DESCRIPTION/PURPOSE

The Integration and Test Plan defines and documents the overall integration and testing approach and activities through delivery to the Government.

DATA REQUIREMENTS

The Integration and Test Plan **shall** include plans for I&T at the Contractor facility, breakdown at the Contractor facility, and I&T at the Government sites, if the development is performed at an offsite Contractor facility. If the development is performed onsite, the Integration and Test Plan **shall** include plans for I&T at the onsite operations facility.

The Integration and Test Plan **shall** include a description of the management organization and processes that will support I&T activities.

The Integration and Test Plan **shall** include a description of how personnel and other resources will be located (factory, sites, other) over the duration of I&T activities and the amount of those resources.

The Integration and Test Plan **shall** include the processes for making, reviewing, communicating, and coordinating changes in planned I&T activities after the activities have started.

The Integration and Test Plan **shall** include the processes for ensuring that ongoing I&T activities do not impact current ESPC operations.

The Integration and Test Plan **shall** include an I&T Test Matrix that shows the traceability of the major test activities and individual tests to the test requirements of the Performance Verification Matrix and the traceability of the test activities and individual tests to the supporting Detailed Test Plan and Procedures and Software Test Plan.

The Integration and Test Plan **shall** include a description of Installation and Test activities associated with Factory increment or build integration, Factory increment or build verification and qualification testing, Factory Integration and Testing, Site installation, integration, and test of Environments and Releases, failover testing, Government Operations Testing support, Security testing, Acceptance Review.

The Integration and Test Plan **shall** include hardware and software installation, test readiness activities, test summary, and verification objectives, and Release Readiness Reviews.

The Integration and Test Plan **shall** include identification of I&T Events and associated entrance, success. and exit criteria consistent with the IMP.

The Integration and Test Plan **shall** include a flow diagram indicating the sequence and relationships of I&T activities over time.

If factory test segments are not physically identical to the operational segments, the Integration and Test Plan **shall** include a description of how the virtual or pseudo-operations configuration equivalency to the environment represented will be demonstrated prior to the associated Test Readiness Review.

The Integration and Test Plan **shall** include test data management plan for all test activities over the I&T life cycle.

The Integration and Test Plan **shall** describe the process to be used for identification, tracking, and resolution of anomalies and non-conformances, including use of the Configuration Management and Anomaly Reporting & Tracking System capabilities.

The Integration and Test Plan **shall** include references showing the relationship of any supporting plans.

IT 2 Detailed Test Plan(s) and Procedures Table 10

DESCRIPTION/PURPOSE

The Detailed Test Plan(s) and Procedures document the step-by-step testing process, for the tests supporting the Integration and Support Activities.

The scope of the Detailed Test Plan(s) and Procedures includes both hardware and software.

DATA REQUIREMENTS

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The Detailed Test Plan(s) and Procedures **shall** contain the content specified in DI-IPSC-81439A. Tailoring of the referenced document will be contingent on Government approval. Contractor equivalent format is acceptable.

The Detailed Test Plan(s) and Procedures **shall** be consistent with the Integration and Test Plan [IT1], the Software Test Plan [SW6] and the Performance Verification Matrix [SE10].

The Detailed Test Plan(s) and Procedures **shall** include the forms necessary for data recording during testing.

The Detailed Test Plan(s) and Procedures **shall** each include and integrate test details, procedures, and other appropriate content from all test participants.

Detailed Test Plans and Procedures **shall** be updated individually when their plan or procedure contents are modified.

The Detailed Test Plan(s) and Procedures **shall** include evaluation criteria/verification criteria with each test case that is traceable to individual requirements.

IT 3 Post-Test Data Analysis Report Table 10

DESCRIPTION/PURPOSE

Documents post-test analysis of data to verify that the ESPDS Work assignment meets its requirements specifications and objectives.

DATA REQUIREMENTS

Post Data Analysis Reports **shall** document any analysis of data generated during ESPDS Work assignment verification activities and interface testing.

Post Data Analysis Reports shall identify the Test Plan and Test Procedure used to generate the data.

Post Data Analysis Reports shall identify the system configuration used to generate the data.

IT 4 Post-Test Data Packages

Table 10

DESCRIPTION/PURPOSE

The Post-Test Data Packages provide a comprehensive record and summary of the results of each asrun test procedure. The Post-Test Data Packages identify which test objectives were accomplished or not, how well predicted performance was verified by the test data, and any other significant events which occurred during testing.

DATA REQUIREMENTS

The Post-Test Data Packages shall contain a copy of the:

- 1. As-Run Test Procedure
- 2. Evidence of Quality Assurance acceptance data
- 3. A summary description and commentary on the test data package
- 4. Test procedure change record listing
- 5. Data trending
- 6. Material review actions resulting from the tests
- 7. Test equipment calibration data (not required for routine test equipment calibrations)
- 8. Anomaly report listing and copies (including status/resolution if completed by submittal)
- 9. Unit Failure-Free/Limited Life Time Accounting
- 10. Recommended corrective actions including retesting, test modifications, requirements waivers or changes, or hardware and/or software changes

The Post-Test Data Packages **shall** include the test results generated by all test participants.

Post-Test Data Packages shall be updated as necessary to accurately reflect test details and results.

TO 1 Operations and Maintenance Manual

Table 11

DESCRIPTION/PURPOSE

The Operations and Maintenance Manual describes the functional capabilities of the WA. The Operations and Maintenance Manualis used by operations staff to learn what the capabilities are and how to perform each capability, and it is used by the hardware and software maintenance team to understand the methodology and design, which helps with hardware and software maintenance support.

DATA REQUIREMENTS

The Operations and Maintenance Manual **shall** contain information needed to understand and use the Subsystems, segments, and infrastructure hardware and software, incorporating, through and as directed by the Project, GFP vendor-provided operations handbooks and content even if sustainment and maintenance remain the responsibilities of those vendors.

The Operations and Maintenance Manual **shall** contain Screen-shots of all critical Operator graphical user interfaces (GUIs) and describe the usage of each GUI.

The Operations and Maintenance Manual **shall** contain detailed descriptions of the functionality provided by each operator-accessible Subsystem, segment, and infrastructure.

The Operations and Maintenance Manual **shall** contain step-by-step instructions (with the use of the screen-shots) on how to use the operator interfaces to achieve these functionalities.

The Operations and Maintenance Manual **shall** indicate how to bring up each Subsystems, segments, and infrastructure function, including cold and warm starts.

The Operations and Maintenance Manual **shall** describe the various modes of operation based on access control, and show screen-shots indicating the difference in the activations based on an operator's role.

The Operations and Maintenance Manual **shall** provide a list of all alerts and notifications produced by each Subsystem, segment, and infrastructure along with their meanings and recommended responses.

The Operations and Maintenance Manual **shall** provide a list and description of all activities that are available to be planned and processed by the Subsystems, segments, and infrastructure functions.

The Operations and Maintenance Manual **shall** provide details on anomaly resolution within the ESPDS WA, including operational procedures, scenarios, personnel involved and their roles and responsibilities, and references, as appropriate, to the Contingency Operations Procedures.

The Operations and Maintenance Manual **shall** provide a list of all operator roles supported by each Subsystem, segment, and infrastructure and the privileges associated with each role.

The Operations and Maintenance Manual **shall** describe any automated functionality and procedures for manual intervention and/or ratification actions.

The Operations and Maintenance Manual **shall** provide a description of the shifts and operator roles and staffing for each shift.

The Operations and Maintenance Manual **shall** indicate recovery methods for each Subsystem, segment, and infrastructure in cases of irrevocable errors or faults.

The Operations and Maintenance Manual **shall** indicate data types expected within each field of each Subsystem, segment, and infrastructure GUI.

The Operations and Maintenance Manual **shall** provide details of the interface operations between the interface and the legacy GOES system and/or facilities.

The Operations and Maintenance Manual **shall** provide details of the interface operations between the Subsystem, segment, and infrastructure and all external interfaces.

The Operations and Maintenance Manual **shall** provide recommended software and hardware maintenance plans and checklists.

The Operations and Maintenance Manual **shall** provide a recommended logistics plan and spare parts requirements.

The Operations and Maintenance Manual **shall** identify maintenance support activities for Subsystems, segments, and infrastructure.

The Operations and Maintenance Manual **shall** provide operator checklists for all Subsystems, segments, and infrastructure functionalities covering routine, anomaly, and contingency operations.

The Operations and Maintenance Manual **shall** contain a contact listing in front of the Operations and Maintenance Manual for key operational organizations and personnel.

The Operations and Maintenance Manual **shall** provide a data dictionary, by subsystem, of information about all system parameters, data, databases, files, and tables, describing the relationships to other data, origin, usage, structure, format, and configurable status.

The Operations and Maintenance Manual (s) **shall** be produced in multiple media, including a Three ring binder with tabs correlated to table of contents listings and an Electronic version with hyperlinks from table of contents to associated sections.

The Electronic version of the Operations and Maintenance Manual **shall** be searchable.

The Operations and Maintenance Manual (s) **shall** be structured by segment and infrastructure, then by operations and operations support, then by topic.

The Operations and Maintenance Manual **shall** include an Appendix - list of subsystem event messages and associated notifications and alerts that the subsystem can generate and associated diagnostic and contingency procedures including fault recovery and isolation information,

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TO 2 Computer Operations Manuals Table 11

DESCRIPTION/PURPOSE

The Computer Operations Manuals (COM) provides computer operations manuals, or updates, for the each WA.

DATA REQUIREMENTS

The COM Scope section **shall** include computer system identification, computer system overview, and document overview.

The COM Identification paragraph **shall** contain the manufacturer's name, model number, and any other identifying information for the computer system to which the COM applies.

The COM Computer System Overview paragraph **shall** briefly state the purpose of the computer system to which the COM applies.

The COM Document Overview paragraph **shall** summarize the purpose and contents of the manual and describe any security or privacy considerations associated with its use.

The COM Reference Documents section **shall** list the number, title, revision, and date of all documents cited in this manual.

The Reference Documents section **shall** identify the source for all documents not available through normal Government stocking activities.

The COM Computer System Operation section(s) **shall** include separate descriptions and instructions for computer system preparation, power on and off, computer system initiation, system shutdown, operating procedures (per mode), input/output procedures and media, monitoring procedures and indicators, problem handling, security, failover and contingency procedures, and any other operator procedures.

Safety precautions, marked by WARNING or CAUTION, shall be included where applicable.

The COM **shall** identify problems that may occur in any step of system operation.

The COM **shall** state the error messages or other indications accompanying problems and describe the automatic and manual procedures to be followed for each occurrence, including, as applicable, evaluation techniques, conditions requiring computer system shutdown, procedures for on-line intervention or abort, steps to be taken to restart computer system operation after an abort or interruption of operation, and procedures for recording information concerning a malfunction.

The COM **shall** describe diagnostics that may be performed to identify and troubleshoot malfunctions in the computer system.

The COM **shall** summarize the diagnostic features of the computer system, including error message syntax and hierarchy for fault isolation and the purpose of each diagnostic feature.

The COM **shall** describe the diagnostic procedures to be followed for the computer system, including the identification of hardware, software, or firmware necessary for executing each

procedure. The step-by-step instructions for executing each procedure, and the diagnostic messages and the corresponding required action **shall** be provided in the COM.

The COM **shall** describe the diagnostics tools available for the computer system, whether hardware, software, or firmware, identify each tool by name and number, and describe the tool and its application.

The COM **shall** be produced as a three ring binder with tabs correlated to table of contents listings.

The COM **shall** be produced as a searchable electronic version with hyperlinks from table of contents to associated sections.

The COM **shall** be structured by segment and infrastructure, then by operations and operations support, and then by topic.

TO 3 Computer Programming Manuals

Table 11

DESCRIPTION/PURPOSE

Provide information to support operations, sustainment, and modification of delivered computer hardware.

DATA REQUIREMENTS

Computer Programming Manuals shall include the content specified in DI-IPSC-81447A.

Computer Programming Manuals shall be structured by segment and then by topic.

Computer Programming Manuals **shall** be produced as a searchable electronic version with hyperlinks from table of contents to associated sections.

Computer Programming Manuals **shall** be delivered also as three ring binders with tabs correlated to table of contents listings.

TO 4 User Training, Education, and Outreach Material(s) Table 11

DESCRIPTION/PURPOSE

To provide material that can be used by the Government for User Training, Education, and Outreach efforts.

DATA REQUIREMENTS

The User Training, Education, and Outreach Material **shall** include educational information highlighting the WA and its applications for Government-provided general public outreach.

The User Training, Education, and Outreach Material shall include a User's Guide.

The User Guide **shall** contain the information required to access data, obtain accounts, generate subscriptions, perform ad hoc queries, and search.

The User Guide **shall** show a screen-shot of each Graphical User Interfaces (GUI) and explain the use of each GUI.

The User Guide **shall** give detailed descriptions of major user functionality provided by the WA, then give step-by-step instructions (with the use of the screen-shots) on how to use the to achieve these functionalities.

The User Guide **shall** give detailed description of the API and explain how to fully utilize the API.

The User Guide **shall** provide details of the various modes of operation based on access control and show screen-shots indicating the differences in the activations based on a user input.

TO 5 Training Plan

Table 11

DESCRIPTION/PURPOSE

Defines and describes training required to provide the operational, support, administrative, and management knowledge required to operate and maintain the delivered system(s) through all life cycle phases and states.

DATA REQUIREMENTS

The Training Plan **shall** identify the training approach, resources required, training material deliveries, and schedules for operational, support, administrative and management training to prepare both contractor and Government personnel to perform the operational, support, administrative, and management functions necessary to carry out the functions through all life cycle phases and states.

The Training Plan **shall** include training to be provided to the ground operations, support, administrative, and management personnel for the delivered system(s), including nominal and contingency guidelines and considerations.

The Training Plan **shall** include recommended certification guidelines and materials for operational, support administrative, and management staff certification.

TO 6 Training Documentation

Table 11

DESCRIPTION/PURPOSE

The Training Documentation is used to provide operators with operational, support, and administrative knowledge of the WA through training that can be applied through all life cycle phases and states.

DATA REQUIREMENTS

The course Training Material **shall** be modularized, individualized, and use multimedia learning resources.

These materials **shall** consist of visual and instructional material for all areas of operations, maintenance, and administration.

Training materials **shall** support the training of operations, maintenance, and other Project-designated personnel.

The Training Material **shall** include Classroom Training that includes Course Objectives, Course Outlines, Student Guide (task descriptions and practical exercises), Class Slide Presentation materials, reference document lists, and Recorded classroom training.

The Training Material **shall** include Console Training by Position, with Operations Tools and Procedures to be exercised, exercises/scenarios/test sequences to be executed, and data to be provided.

The Training **shall** include familiarization and use of appropriate Handbooks, Manuals, and Procedures.

TO 7 Maintenance Plan

Table 11

DESCRIPTION/PURPOSE

The Maintenance Plan provides the plan for maintenance of the contractor-procured and developed hardware and software.

DATA REQUIREMENTS

The Maintenance Plan **shall** include a section for hardware and a section for software.

The Maintenance Plan **shall** describe the approach and processes to be applied to maintenance of all hardware and software for which the Contractor has delivered or has maintenance responsibility.

The Maintenance Plan **shall** identify the preventive maintenance for all systems/equipment and provides a means for scheduling its accomplishment.

The Maintenance Plan **shall** include both developed and COTS software and hardware maintenance.

The Maintenance Plan **shall** provide a system of records to document all maintenance, including both preventive and corrective maintenance, as well as modifications.

The Maintenance Plan **shall** specify reports to be provided.

The Maintenance Plan **shall** describe the approach for configuration control.

The Maintenance Plan **shall** specify training requirements and schedules.

The Maintenance Plan **shall** describe the process for maintaining visibility and control of system problems using discrepancy reports or similar mechanisms.

The Maintenance Plan **shall** identify the approach to maintaining the sites' critical functions in addition to the general off-site maintenance support.

The Maintenance Plan **shall** describe how the maintenance provider(s) for COTS products will be selected and the dates of warranty or maintenance contract expiration.

TO 8 Maintenance Records

Table 11

DESCRIPTION/PURPOSE

Establish and manage maintenance records for contractor-maintained portions of the WA.

DATA REQUIREMENTS

The maintenance records shall be maintained for contractor-sustained items.

The maintenance records **shall** include operating logs for each equipment, including on/off times, operating time, down time for each maintenance/repair event, equipment rack access records (times opened/closed, purpose, identification of individuals), and failure data.

The maintenance records **shall** include configuration logs for each piece of equipment, including a current configuration list for the equipment, dates and times of equipment or LRU installation and removal, and serial numbers of LRUs removed for repair and for the replacement LRUs.

The maintenance records **shall** include a system of maintenance work orders and fabrication/repair records covering pertinent data, including LRU identification, diagnostic data, repair operations and steps, repair time duration, hardware disposition and routing, spare parts availability (and resupply delays), test procedure for repaired item and test results.

The maintenance records **shall** be maintained and stored in a readily accessible, identifiable and retrievable form.

The records **shall** be retained at the Contractor's facility and at NSOF for the duration of the task order.

The maintenance records shall be available for Project Office inspection.

Copies of specific documents **shall** be provided in response to specific Project Office requests.

TO 9 Facilities Plan

Table 11

DESCRIPTION/PURPOSE

The Facilities Plan provides the plan for facility, physical requirements and support.

DATA REQUIREMENTS

The Facilities Plan **shall** provide all necessary facility and physical requirements, including but not limited to:

- 1. Floor space
- 2. Primary and backup power
- 3. Cooling
- 4. Fire protection
- 5. Plug/connector types
- 6. Number and types of network connections
- 7. Network address allocations

The Facilities Plan **shall** describe and indicate the purpose of the facilities needed to support the deliverables, including but not limited to:

- 1. Special buildings, rooms, mock-ups, building features such as raised flooring or cabling
- 2. Building features to support security and privacy requirements
- 3. Building features to support safety requirements (smoke alarms, safety glass, etc.)
- 4. Special power requirements

Diagrams may be included as applicable.

QA 1 Quality Assurance Implementation Plan (QAIP) Table 12

DESCRIPTION/PURPOSE

To define the contractor's systematic approach to, and processes used in the management, development, testing (verification, validation, and qualification), documentation, configuration management, anomaly identification and resolution, and quality assurance of the hardware, software and test equipment.

DATA REQUIREMENTS

The Quality Assurance Implementation Plan (QAIP) **shall** address how each of the Quality assurance Requirements will be met.

The QAIP **shall** contain the title, approval page, scope, the field of application, and table of contents.

The QAIP shall contain introductory pages about the organization concerned and the manual itself.

The QAIP shall contain the quality policy and objectives of OSDPD.

The QAIP **shall** contain the description of the organization, responsibilities and authorities, including the organization responsible for parts, materials, reliability, safety, assembly and test requirements.

The QAIP **shall** contain a description of the elements of the quality system, Contractor policy regarding each element and Contractor implementation procedure for each clause or reference(s) to approved quality system procedures.

The QAIP procedures **shall** address the implementation of all requirements cited in this document.

The QAIP **shall** contain a definitions section, if appropriate.

The QAIP shall contain an appendix for supportive data, if appropriate.

QAIP distribution and changes **shall** be implemented by a controlled process.

QA 2 Reliability, Maintainability, and Availability (RMA) Predictions Report Table 12

DESCRIPTION/PURPOSE

Reports the structured, disciplined approaches to quantitatively analyze reliability, availability and maintainability (including hardware and software) in order to assist with the evaluation of alternative design concepts; to reduce design, operation and maintenance costs; to determine the feasibility of achieving required reliability, availability and maintainability; and to validate that the design meets the requirements specification.

DATA REQUIREMENTS

The RMA Predictions report shall evaluate alternative design concepts, redundancy, and failover approaches, if any.

The RMA Predictions report shall identify design elements that are the greatest detractors of ESPDS availability.

The RMA Predictions report shall identify potential mission-limiting elements and segments that will require special attention in parts selection, testing, and operations.

The RMA Predictions report shall evaluate the impact to ESPDS availability of proposed engineering changes and waiver requests, if any.

The RMA Predictions report shall collect failure and time data throughout the development lifecycle

The RMA Predictions Report shall document the methods and results of reliability assessments including mathematical models, reliability block diagrams, failure rates, failure definitions, degraded operating modes, trade-offs, assumptions, and any other pertinent information used in the assessment process.

The RMA Predictions Report shall identify the sources used for the reliability predictions.

The RMA Predictions Report shall list the subassemblies and units to be assessed.

The RMA Predictions Report shall document the methods and results of quantitative system availability assessments including availability allocation, mathematical models, operating and maintenance modes, trade-offs, assumptions, and any other pertinent information used in the assessment process.

The RMA Predictions Report shall provide a model for use in quantitative assessment of system and subsystem availability addressing the following availability measures: inherent availability and operational availability.

The RMA Predictions Report shall document the methods and results of system maintainability assessments, including definitions used in quantitative maintainability measurements, maintainability allocations, mathematical models, maintainability predictions, maintenance and logistics concepts, for which hardware/software is designed (and under which COTS items have been selected).

The RMA Predictions Report shall document justification for the input to determine MTTR (i.e

maintenance activities) within the limitations of system design and system operation.